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AN ECONOMIC INDEX FOR DETERMINING THE RELATIVE VALUE OF MILK  
AND FAT IN PREDICTED DIFFERENCES OF BULLS AND COW INDEX VALUES  
OF COWS

by H. D. Norman and F. N. Dickinson

The comparison of bulls and cows, based on the profit-making potential of their daughters, is receiving more attention by dairymen as they become increasingly more aware of the greater profitability associated with superior genotypes. Heretofore, the transmitting abilities of bulls and cows have been evaluated separately on the basis of the economically important traits of milk and fat yield. However, the economic value of the produce depends both on the quantity of milk and its milk fat content. In a few parts of the country, other milk components, primarily protein or solids-not-fat, are also included in the milk-pricing scheme, but this practice is not widespread and information on genetic merit for these components is almost entirely lacking. Therefore, the discussion in this letter relates the transmitting ability of bulls and cows for milk and fat to the economic value of milk which their daughters would be expected to produce.

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## Relative Economic Importance of Predicted Differences for Milk and Fat in Sire Summaries

The measures of transmitting ability most commonly available on a bull in the United States are the Predicted Differences (PD) for milk and for fat. The PD is the expected deviation of the bull's progeny from their herdmates in breed average herds; in other words, it is one-half the bull's breeding value. Having more than one rating of production for each bull (PD milk and PD fat) has frequently posed problems for breeders and sire committees in determining which available bulls should be selected for service. For instance, it would not be unusual to want to choose for breeding purposes between Bull A having PD's of +1,000 lb. for milk and +10 lb. for fat and Bull B having PD's of +500 lb. for milk and +30 lb. for fat. Regardless of the extent of evaluation in other traits, it seems desirable to know the difference in expected total income from milk produced by daughters of these two bulls.

Milk price depends upon the milk fat percentage in almost all areas of the United States. A consequence is that in some States sire lists are ranked according to PD for milk while others are ranked by PD for fat. Spahr <sup>1/</sup> and Wilton and Van Vleck <sup>2/</sup> have given procedures to evaluate the relative emphasis that should be given to milk versus fat, and have given examples of their indexes using specific prices. Spahr's study showed that gross income within the five breeds was more highly correlated with fat than milk yield. Wilton and Van Vleck showed that under a typical New York pricing system (\$5.00/cwt. for 3.5% milk with a differential of \$0.06/0.1%/cwt.), selection based either on PD milk or PD fat, would be, respectively, only 95 or 92 percent as effective in increasing value of product as would selection considering both traits. Since gains are cumulative each generation, such differences become extremely important for increasing herd

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<sup>1/</sup> Spahr, S. L. Relative economic importance of milk and milk fat percentage in selecting artificially inseminated proven dairy sires. J. Dairy Sci., 50:847. 1967.

<sup>2/</sup> Wilton, J. W., and Van Vleck, L. D. Sire evaluation for economic merit. J. Dairy Sci., 52:235. 1969.

profitability over a long period of time. This means that selecting for both milk and fat is necessary for maximum economic progress, even though progress in each trait will be slower.

Gross income can be determined using fat yield instead of fat percent if milk yield is given. In fact, comparing dollar income using PD milk and PD fat has one advantage over using PD milk and fat percent. The advantage is that the economic value resulting from the Predicted Differences of milk and fat are additive, and are therefore independent of the herd or breed averages. This is not so if the indexes are based on PD milk and fat percent. This assures, with some certainty for the immediate future, that decisions in selecting sires based on both PD milk and PD fat can be made while ignoring the emphasis that dairymen gave to these traits in their herds in the past.

An economic index predicting gross income from milk and fat production can be used to simplify selection among bulls of the same breed. The availability of an index for net income, one that would consider such factors as feed intake, efficiency, health costs, calving interval, and herd life, would be even more useful, but certainly more difficult to obtain for individual bulls. Miller, Hooven, and Smith <sup>3/</sup> have results to indicate that as the value of milk produced increases 1 dollar, income over feed cost increases about 80 cents. Therefore, it appears that the relationship between gross income and net income is quite high, and an economic index which predicts gross income would be effective for increasing net income as well.

The formula for computing gross income based on Predicted Differences, breed averages, and prices for milk and milk fat is shown in Appendix I. This formula can be used to calculate the gross income per lactation for the daughters of a bull.

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<sup>3/</sup> Miller, R. H., Hooven, N. W., and Smith, J. W. Associations among measures of economic efficiency. J. Dairy Sci. (Submitted for publication)



A second formula for comparing the daughters of different bulls of the same breed is shown in Appendix II. This formula expresses the expected income for the daughters of a bull based on PD's for milk and fat relative to the breed average, for a specific pricing system. This permits the direct comparisons of individual bulls to breed average in the same manner as does PD's, but on the relative gross income expected from their daughters.

The formula in Appendix II was solved using various combinations of milk price and fat differential. These results are shown in tables and give the deviation from breed average income per lactation that can be expected from the daughters of bulls at various levels of PD's for milk and fat. Forty-five tables are presented, based on 3.5 percent milk prices ranging from \$4.50 to \$8.50 per cwt. by increments of \$0.50, and fat differentials of \$0.07 to \$0.09 at increments of \$0.005. These tables provide a quick measure of relative gross income and should be applicable to most present pricing systems as well as those in the immediate future. A list of table numbers according to the various milk prices and test differentials is given in table 1.

TABLE 1.--List of tables by milk and milk fat prices

Price of milk per cwt. at 3.5 percent test	Milk fat differential of 0.1 percent/cwt. in cents				
	7	7½	8	8½	9
(\$)	----- Table numbers -----				
4.50	2	3	4	5	6
5.00	7	8	9	10	11
5.50	12	13	14	15 <sup>4/</sup>	16
6.00	17	18	19	20	21
6.50	22	23	24	25	26
7.00	27	28	29	30	31
7.50	32	33	34	35	36
8.00	37	38	39	40	41
8.50	42	43	44	45	46

<sup>4/</sup> Approximately the average U.S. price for 1970, Dairy Situation, Economic Research Service. USDA DS-333. November 1970.

The income values in tables 2 through 46 are based on Mature Equivalent production. Actual deviation in daughters' first-lactation income from herdmates would be slightly less than that shown in the tables. This, of course, would depend upon the age of the daughters. Generally, differences in first-lactation yield would be about 80 to 85 percent of those at maturity, so dollar value of production would be the same percentages of these table values.

It is suggested that when using these tables the milk price should be the gross price per hundredweight minus handling charges and any other deductions which are taken out before the dairyman receives his milk check. This should result in relative deviations in gross income that are closer

to the effective income which the dairyman receives. Milk prices vary considerably throughout the year, so the prices used should be those expected from the total volume of milk to be sold.

For illustrating the use of the tables, compare Bulls A and B referred to previously using two different pricing systems.

Example 1: (from table 15)

Average 1970 U.S. pricing system:

Milk price is \$5.00/cwt. for 3.5% test  
Milk fat differential is \$0.085/0.1%/cwt.

These comparisons are shown below:

	<u>PD milk</u>	<u>PD fat</u>	<u>Value of production</u>
Bull A....	+1,000 lb.	+10 lb.	\$33.75
Bull B....	+500 lb.	+30 lb.	\$38.12

The milk produced by Bull A's daughters will be worth \$33.75 more than their breed average herd mates, whereas the milk produced by Bull B's daughters will be worth \$38.12 more than their herd mates. Thus, when average U.S. milk prices are used, Bull B is economically superior to Bull A. Yet, if ranked on PD milk, Bull A would be 500 pounds above Bull B and might well be in higher demand because of this. Bull A would deserve this higher demand because of expected income under a system in which dairymen are producing milk for fluid utilization according to Class I prices.

For these conditions a high fat test is not as important, and so more emphasis should be given to PD milk.

Example 2: (from table 30)

Typical 1970 Class I pricing system:

Milk price is \$7.00/cwt. for 3.5% test  
Milk fat differential is \$0.085/0.1%/cwt.



Bull A's daughters are expected to gross \$48.75 more than breed average herdmates, whereas Bull B's daughters are expected to gross \$45.62 above such herdmates. Under these conditions, Bull A has a slight advantage in increasing total income from milk yield.

Apparently Spahr's<sup>5/</sup> and Wilton and Van Vleck's<sup>6/</sup> different conclusions about the relative importance of milk and fat yields resulted partially from the use of different price ratios of base milk to fat differential. It appears that at the average U.S. prices for 1970 (\$5.50 and \$0.085, for milk price and fat differential), a change of a standard deviation in PD fat is as important as a change of a standard deviation in PD milk within the Holstein breed. Under some pricing systems (those having a high ratio of milk price to test differential), the bulls with the highest PD milk will return the highest income from milk production; in other systems (those with a low milk to test ratio), the highest profit makers are the highest PD fat bulls. Within the higher fat percentage breeds it would be easier to increase economic merit selecting for fat yield than for milk yield. Within all breeds, bulls can be expected to shift ranks somewhat under different pricing systems.

In some areas, payment is being made for total yield of various constituents other than fat, especially solids-not-fat or protein. Pricing schemes of this type are a refinement of past pricing systems. The production of milk solids-not-fat and protein will be emphasized in the future more than has been in the past, and payment will probably be made directly on the level of these milk components. Therefore, dairymen should give some consideration to the possible change in the pricing of these milk components in the future when selecting bulls. Unfortunately, at the present time little is known about the levels of protein and solids-not-fat which bulls transmit to their daughters, except what can be inferred from the average genetic relationships of the levels of these components to milk yield and fat content.

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<sup>5/</sup> See footnote 1.

<sup>6/</sup> See footnote 2.

## Relative Economic Importance of Cow Index Values for Milk and Fat

The formulas in Appendix I and II and the values in tables 2 through 46 can be used to estimate the expected gross income of daughters of cows, the same as for the daughters of bulls. The terms  $TA_m$  and  $TA_f$  used in the appendix formulas represent the genetic transmitting ability of the parent (sire or dam) for milk or fat. Therefore, if a bull's daughters are to be evaluated, the bull's PD's for milk and fat are used. Similarly, if a cow's daughters are to be evaluated, the cow's Cow Index Values for milk and fat are used in the formulas. Since PD's and Cow Indexes are both estimates of genetic transmitting ability, they can be used for the same purpose in looking up values in the tables.

### Summary

The income that dairymen receive for milk in most areas of the United States depends both on total quantity and milk fat content. Thus, for maximum economic progress bulls and cows should be selected for both milk and fat even though progress in each will be slower. At present average U.S. prices, a standard deviation increase in fat is as beneficial as a standard deviation increase in milk in increasing economic value. With variation in pricing systems, it appears that in some areas it would be to the breeders' advantage to give more emphasis to milk than fat, while in other areas it seems the reverse should be true. Tables are provided so that bulls and cows can be evaluated on economic merit using the appropriate milk price and fat differential.

## Appendix I

The formula for computing expected gross income for milk produced by the daughters of a specific bull or cow is:

### Equation 1

$$I = (BA_m + TA_m) \times (P - D \times T_b) + (BA_f + TA_f) \times (D \times 100\%)$$

where:

I is the expected total income for milk produced in a 305-day lactation.

$BA_m$  and  $BA_f$  are the breed averages in units for milk and fat yield, respectively. (See USDA-DHIA Sire Summary)

$TA_m$  and  $TA_f$  are the genetic transmitting abilities in units for milk and fat, respectively. If the daughters of a bull are being evaluated, PD for milk is used for  $TA_m$ , and PD for fat is used for  $TA_f$ . If the daughters of a cow are being evaluated, the Cow Index Value for milk is used for  $TA_m$ , and the Cow Index Value for fat is used for  $TA_f$ .

P is the price paid for a unit of milk at the base test.

D is the test differential or the change in value of a unit of milk for each change of 1 percent in fat test.

$T_b$  is the base test in percent.

### Example 3:

The expected gross income for milk produced by daughters of Bull C with a PD for milk of +1,200 lb. and a PD for fat of +40 lb. is to be calculated using the following information:

$BA_m = 14,250$  lb.;  $BA_f = 525$  lb.;  $P = \$0.055/\text{lb.}$   
(obtained from \$5.50/cwt.).

$D = \$0.0085/\%/lb.$  (obtained from  $\$0.085/0.1\%/cwt.$ ).

$$T_b = 3.5\%$$

Since the bull's PD for milk and fat are used for  $TA_m$  and  $TA_f$ , then  $TA_m = 1,200$  lb. and  $TA_f = 40$  lb.

The index formula from equation 1 is solved as follows:

$$I = (BA_m + TA_m) \times (P - D \times T_b) + (BA_f + TA_f) \times (D \times 100\%)$$

$$\begin{aligned} I &= (14,250 \text{ lb.} + 1,200 \text{ lb.}) \times (\$0.055/\text{lb.} - (\$0.0085/\%/lb.) \\ &\quad \times (3.5\%)) + (525 \text{ lb.} + 40 \text{ lb.}) \times (\$0.0085/\%/lb. \\ &\quad \times 100\%) \\ &= (15,450 \text{ lb.}) \times (\$0.02525/\text{lb.}) + (565 \text{ lb.}) \times (\$0.85/\text{lb.}) \\ &= \$390.11 + \$480.25 \\ &= \$870.36 \end{aligned}$$

Therefore, the expected gross income from daughters of Bull C is, on the average, \$870.36 under this pricing system.

## Appendix II

The formula for computing expected income for the daughters of a specific bull relative to the daughters of a breed average bull is:

### Equation 2

$$V = TA_m \times (P - D \times T_b) + TA_f \times (D \times 100\%)$$

where:

V is the expected total value for milk produced expressed as a deviation from the average income for the breed,  
and

$TA_m$ , P, D,  $T_b$ ,  $TA_f$  are the same as defined in Appendix I.

Example 4:

Set up to compute deviation income from breed average for bull's daughters according to the pricing system used in

table 15. The milk price is \$5.50/cwt. for 3.5% test, or  $P = \$0.055/\text{lb.}$  The test differential is  $\$0.085/0.1\%/\text{cwt.}$ , or  $D = \$0.0085\%/ \text{lb.}$  (i.e., milk with 0.0% test is worth \$2.525/cwt.)

From equation 2:

$$V = TA_m \times (P - D \times T_b) + TA_f \times (D \times 100\%)$$

$$V = (TA_m \text{ in lb.}) \times [ \$0.055/\text{lb.} - (\$0.0085\%/ \text{lb.}) \times (3.5\%) ] \\ + (TA_f \text{ in lb.}) \times (\$0.0085\%/ \text{lb.}) \times (100\%)$$

$$V = (TA_m \text{ in lb.}) \times (\$0.02525/\text{lb.}) + (TA_f \text{ in lb.}) \\ \times (\$0.85/\text{lb.})$$

This reduced equation simply indicates that the transmitting ability for milk will be multiplied by the value of a unit of 0.0 percent milk, and the transmitting ability for fat will be multiplied by the value of a unit of fat.

Index Bull C:

Bull C has a PD milk = +1,200 lb. and  
a PD fat = +40 lb.

$$V = (1,200 \text{ lb.}) \times (\$0.02525/\text{lb.}) + (40 \text{ lb.}) \times (\$0.85/\text{lb.}) \\ = \$30.30 + \$34.00 \\ = \$64.30$$

Therefore, under this pricing system, daughters of Bull C would be expected to average \$64.30 more gross income per lactation than their breed average herdmates.



TABLE 2. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PRECITCO DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$4.50 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.070 PER 0.1% PER CWT.)

	PREICTEO OIFFERENCE OR COW INDEX FOR FAT (LBS.)													
PREO.OIFF. OR COW INDEX FOR MILK (LBS.)	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	OLLAR OEVIATION FROM BREEO AVERAGE													
-400	-15.20	-8.20	-4.70	-1.20	2.30	5.80	9.30	12.80	16.30	19.80	26.80	33.80	40.80	
-300	-13.15	-6.15	-2.65	0.85	4.35	7.85	11.35	14.85	18.35	21.85	28.85	35.85	42.85	
-200	-11.10	-4.10	-0.60	2.90	6.40	9.90	13.40	16.90	20.40	23.90	30.90	37.90	44.90	
-100	-9.05	-2.05	1.45	4.95	8.45	11.95	15.45	18.95	22.45	25.95	32.95	39.95	46.95	
0	-7.00	0.0	3.50	7.00	10.50	14.00	17.50	21.00	24.50	28.00	35.00	42.00	49.00	
100	-4.95	2.05	5.55	9.05	12.55	16.05	19.55	23.05	26.55	30.05	37.05	44.05	51.05	
200	-2.90	4.10	7.60	11.10	14.60	18.10	21.60	25.10	28.60	32.10	39.10	46.10	53.10	
300	-0.85	6.15	9.65	13.15	16.65	20.15	23.65	27.15	30.65	34.15	41.15	48.15	55.15	
400	1.20	8.20	11.70	15.20	18.70	22.20	25.70	29.20	32.70	36.20	43.20	50.20	57.20	
500	3.25	10.25	13.75	17.25	20.75	24.25	27.75	31.25	34.75	38.25	45.25	52.25	59.25	
600	5.30	12.30	15.80	19.30	22.80	26.30	29.80	33.30	36.80	40.30	47.30	54.30	61.30	
700	7.35	14.35	17.85	21.35	24.85	28.35	31.85	35.35	38.85	42.35	49.35	56.35	63.35	
800	9.40	16.40	19.90	23.40	26.90	30.40	33.90	37.40	40.90	44.40	51.40	58.40	65.40	
900	11.45	18.45	21.95	25.45	28.95	32.45	35.95	39.45	42.95	46.45	53.45	60.45	67.45	
1000	13.50	20.50	24.00	27.50	31.00	34.50	38.00	41.50	45.00	48.50	55.50	62.50	69.50	
1100	15.55	22.55	26.05	29.55	33.05	36.55	40.05	43.55	47.05	50.55	57.55	64.55	71.55	
1200	17.60	24.60	28.10	31.60	35.10	38.60	42.10	45.60	49.10	52.60	59.60	66.60	73.60	
1300	19.65	26.65	30.15	33.65	37.15	40.65	44.15	47.65	51.15	54.65	61.65	68.65	75.65	
1400	21.70	28.70	32.20	35.70	39.20	42.70	46.20	49.70	53.20	56.70	63.70	70.70	77.70	
1500	23.75	30.75	34.25	37.75	41.25	44.75	48.25	51.75	55.25	58.75	65.75	72.75	79.75	
1600	25.80	32.80	36.30	39.80	43.30	46.80	50.30	53.80	57.30	60.80	67.80	74.80	81.80	
1700	27.85	34.85	38.35	41.85	45.35	48.85	52.35	55.85	59.35	62.85	69.85	76.85	83.85	
1800	29.90	36.90	40.40	43.90	47.40	50.90	54.40	57.90	61.40	64.90	71.90	78.90	85.90	
1900	31.95	38.95	42.45	45.95	49.45	52.95	56.45	59.95	63.45	66.95	73.95	80.95	87.95	
2000	34.00	41.00	44.50	48.00	51.50	55.00	58.50	62.00	65.50	69.00	76.00	83.00	90.00	
2100	36.05	43.05	46.55	50.05	53.55	57.05	60.55	64.05	67.55	71.05	78.05	85.05	92.05	
2200	38.10	45.10	48.60	52.10	55.60	59.10	62.60	66.10	69.60	73.10	80.10	87.10	94.10	
2300	40.15	47.15	50.65	54.15	57.65	61.15	64.65	68.15	71.65	75.15	82.15	89.15	96.15	
2400	42.20	49.20	52.70	56.20	59.70	63.20	66.70	70.20	73.70	77.20	84.20	91.20	98.20	
2500	44.25	51.25	54.75	58.25	61.75	65.25	68.75	72.25	75.75	79.25	86.25	93.25	100.25	

TABLE 3. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PRECITCO DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$4.50 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.075 PER 0.1% PER CWT.)

	PREICTEO DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
PREC.OIFF. OR COW INDEX FOR MILK (LBS.)	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	DOLLAR DEVIATION FROM BREED AVERAGE													
-400	-15.90	-7.50	-3.75	-0.00	3.75	7.50	11.25	15.00	18.75	22.50	30.00	37.50	45.00	
-300	-13.12	-5.63	-1.88	1.87	5.62	9.37	13.12	16.87	20.62	24.37	31.87	39.37	46.87	
-200	-11.25	-3.75	-0.00	3.75	7.50	11.25	15.00	18.75	22.50	26.25	33.75	41.25	48.75	
-100	-9.37	-1.88	1.87	5.62	9.37	13.12	16.87	20.62	24.37	28.12	35.62	43.12	50.62	
0	-7.50	0.0	3.75	7.50	11.25	15.00	18.75	22.50	26.25	30.00	37.50	45.00	52.50	
100	-5.62	1.88	5.62	9.37	13.12	16.87	20.62	24.37	28.12	31.87	39.37	46.87	54.37	
200	-3.75	3.75	7.50	11.25	15.00	18.75	22.50	26.25	30.00	33.75	41.25	48.75	56.25	
300	-1.87	5.63	9.38	13.12	16.87	20.62	24.37	28.12	31.87	35.62	43.12	50.62	58.12	
400	0.00	7.50	11.25	15.00	18.75	22.50	26.25	30.00	33.75	37.50	45.00	52.50	60.00	
500	1.88	9.38	13.13	16.87	20.62	24.37	28.12	31.87	35.62	39.37	46.87	54.37	61.87	
600	3.75	11.25	15.00	18.75	22.50	26.25	30.00	33.75	37.50	41.25	48.75	56.25	63.75	
700	5.63	13.13	16.87	20.63	24.37	28.12	31.87	35.62	39.37	43.12	50.62	58.12	65.62	
800	7.50	15.00	18.75	22.50	26.25	30.00	33.75	37.50	41.25	45.00	52.50	60.00	67.50	
900	9.38	16.87	20.62	24.37	28.12	31.87	35.62	39.37	43.12	46.87	54.37	61.87	69.37	
1000	11.25	18.75	22.50	26.25	30.00	33.75	37.50	41.25	45.00	48.75	56.25	63.75	71.25	
1100	13.13	20.63	24.37	28.12	31.87	35.62	39.37	43.12	46.87	50.62	58.12	65.62	73.12	
1200	15.00	22.50	26.25	30.00	33.75	37.50	41.25	45.00	48.75	52.50	60.00	67.50	75.00	
1300	16.88	24.38	28.13	31.88	35.62	39.38	43.13	46.87	50.63	54.37	61.87	69.37	76.87	
1400	18.75	26.25	30.00	33.75	37.50	41.25	45.00	48.75	52.50	56.25	63.75	71.25	78.75	
1500	20.63	28.13	31.88	35.62	39.38	43.13	46.88	50.62	54.38	58.12	65.62	73.12	80.62	
1600	22.50	30.00	33.75	37.50	41.25	45.00	48.75	52.50	56.25	60.00	67.50	75.00	82.50	
1700	24.38	31.88	35.62	39.38	43.13	46.88	50.63	54.37	58.13	61.87	69.37	76.87	84.37	
1800	26.25	33.75	37.50	41.25	45.00	48.75	52.50	56.25	60.00	63.75	71.25	78.75	86.25	
1900	28.13	35.63	39.38	43.13	46.88	50.63	54.38	58.12	61.88	65.62	73.12	80.62	88.12	
2000	30.00	37.50	41.25	45.00	48.75	52.50	56.25	60.00	63.75	67.50	75.00	82.50	90.00	
2100	31.88	39.38	43.13	46.88	50.63	54.38	58.13	61.87	65.63	69.37	76.87	84.37	91.87	
2200	33.75	41.25	45.00	48.75	52.50	56.25	60.00	63.75	67.50	71.25	78.75	86.25	93.75	
2300	35.63	43.13	46.88	50.63	54.38	58.13	61.88	65.62	69.38	73.12	80.62	88.12	95.62	
2400	37.50	45.00	48.75	52.50	56.25	60.00	63.75	67.50	71.25	75.00	82.50	90.00	97.50	
2500	39.38	46.88	50.63	54.38	58.13	61.88	65.63	69.37	73.13	76.87	84.37	91.87	99.37	

TABLE 4. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$4.50 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.080 PER 0.1% PER CWT.)

PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	DOLLAR DEVIATION FROM BREED AVERAGE													
-400	-14.80	-6.80	-2.80	1.20	5.20	9.20	13.20	17.20	21.20	25.20	33.20	41.20	49.20	
-300	-13.10	-5.10	-1.10	2.50	6.60	10.60	14.60	18.60	22.60	26.60	34.60	42.60	50.60	
-200	-11.40	-3.40	0.60	4.60	8.60	12.60	16.60	20.60	24.60	28.60	36.60	44.60	52.60	
-100	-9.70	-1.70	2.30	6.30	10.30	14.30	18.30	22.30	26.30	30.30	38.30	46.30	54.30	
0	-8.00	0.0	4.00	8.00	12.00	16.00	20.00	24.00	28.00	32.00	40.00	48.00	56.00	
100	-6.30	1.70	5.70	9.70	13.70	17.70	21.70	25.70	29.70	33.70	41.70	49.70	57.70	
200	-4.60	3.40	7.40	11.40	15.40	19.40	23.40	27.40	31.40	35.40	43.40	51.40	59.40	
300	-2.90	5.10	9.10	13.10	17.10	21.10	25.10	29.10	33.10	37.10	45.10	53.10	61.10	
400	-1.20	6.80	10.80	14.80	18.80	22.80	26.80	30.80	34.80	38.80	46.80	54.80	62.80	
500	0.50	8.50	12.50	16.50	20.50	24.50	28.50	32.50	36.50	40.50	48.50	56.50	64.50	
600	2.20	10.20	14.20	18.20	22.20	26.20	30.20	34.20	38.20	42.20	50.20	58.20	66.20	
700	3.90	11.90	15.90	19.90	23.90	27.90	31.90	35.90	39.90	43.90	51.90	59.90	67.90	
800	5.60	13.60	17.60	21.60	25.60	29.60	33.60	37.60	41.60	45.60	53.60	61.60	69.60	
900	7.30	15.30	19.30	23.30	27.30	31.30	35.30	39.30	43.30	47.30	55.30	63.30	71.30	
1000	9.00	17.00	21.00	25.00	29.00	33.00	37.00	41.00	45.00	49.00	57.00	65.00	73.00	
1100	10.70	18.70	22.70	26.70	30.70	34.70	38.70	42.70	46.70	50.70	58.70	66.70	74.70	
1200	12.40	20.40	24.40	28.40	32.40	36.40	40.40	44.40	48.40	52.40	60.40	68.40	76.40	
1300	14.10	22.10	26.10	30.10	34.10	38.10	42.10	46.10	50.10	54.10	62.10	70.10	78.10	
1400	15.80	23.80	27.80	31.80	35.80	39.80	43.80	47.80	51.80	55.80	63.80	71.80	79.80	
1500	17.50	25.50	29.50	33.50	37.50	41.50	45.50	49.50	53.50	57.50	65.50	73.50	81.50	
1600	19.20	27.20	31.20	35.20	39.20	43.20	47.20	51.20	55.20	59.20	67.20	75.20	83.20	
1700	20.90	28.90	32.90	36.90	40.90	44.90	48.90	52.90	56.90	60.90	68.90	76.90	84.90	
1800	22.60	30.60	34.60	38.60	42.60	46.60	50.60	54.60	58.60	62.60	70.60	78.60	86.60	
1900	24.30	32.30	36.30	40.30	44.30	48.30	52.30	56.30	60.30	64.30	72.30	80.30	88.30	
2000	26.00	34.00	38.00	42.00	46.00	50.00	54.00	58.00	62.00	66.00	74.00	82.00	90.00	
2100	27.70	35.70	39.70	43.70	47.70	51.70	55.70	59.70	63.70	67.70	75.70	83.70	91.70	
2200	29.40	37.40	41.40	45.40	49.40	53.40	57.40	61.40	65.40	69.40	77.40	85.40	93.40	
2300	31.10	39.10	43.10	47.10	51.10	55.10	59.10	63.10	67.10	71.10	79.10	87.10	95.10	
2400	32.80	40.80	44.80	48.80	52.80	56.80	60.80	64.80	68.80	72.80	80.80	88.80	96.80	
2500	34.50	42.50	46.50	50.50	54.50	58.50	62.50	66.50	70.50	74.50	82.50	90.50	98.50	

TABLE 5. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$4.50 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.085 PER 0.1% PER CWT.)

	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	DOLLAR DEVIATION FROM BREED AVERAGE													
-400	-14.60	-6.10	-1.85	2.40	6.65	10.90	15.15	19.40	23.65	27.90	36.40	44.90	53.40	
-300	-13.07	-4.58	-0.33	3.92	8.17	12.42	16.67	20.92	25.17	29.42	37.92	46.42	54.92	
-200	-11.55	-3.05	1.20	5.45	9.70	13.95	18.20	22.45	26.70	30.95	39.45	47.95	56.45	
-100	-10.02	-1.52	2.72	6.97	11.22	15.47	19.72	23.97	28.22	32.47	40.97	49.47	57.97	
0	-8.50	0.0	4.25	8.50	12.75	17.00	21.25	25.50	29.75	34.00	42.50	51.00	59.50	
100	-6.97	1.52	5.77	10.02	14.27	18.52	22.77	27.02	31.27	35.52	44.02	52.52	61.02	
200	-5.45	3.05	7.30	11.55	15.80	20.05	24.30	28.55	32.80	37.05	45.55	54.05	62.55	
300	-3.92	4.58	8.82	13.07	17.32	21.57	25.82	30.07	34.32	38.57	47.07	55.57	64.07	
400	-2.40	6.10	10.35	14.60	18.85	23.10	27.35	31.60	35.85	40.10	48.60	57.10	65.60	
500	-0.87	7.63	11.88	16.12	20.37	24.62	28.87	33.12	37.37	41.62	50.12	58.62	67.12	
600	0.65	9.15	13.40	17.65	21.90	26.15	30.40	34.65	38.90	43.15	51.65	60.15	68.65	
700	2.18	10.68	14.93	19.17	23.42	27.67	31.92	36.17	40.42	44.67	53.17	61.67	70.17	
800	3.70	12.20	16.45	20.70	24.95	29.20	33.45	37.70	41.95	46.20	54.70	63.20	71.70	
900	5.23	13.73	17.97	22.22	26.47	30.72	34.97	39.22	43.47	47.72	56.22	64.72	73.22	
1000	6.75	15.25	19.50	23.75	28.00	32.25	36.50	40.75	45.00	49.25	57.75	66.25	74.75	
1100	8.27	16.77	21.02	25.27	29.52	33.77	38.02	42.27	46.52	50.77	59.27	67.77	76.27	
1200	9.80	18.30	22.55	26.80	31.05	35.30	39.55	43.80	48.05	52.30	60.80	69.30	77.80	
1300	11.32	19.82	24.07	28.32	32.57	36.82	41.07	45.32	49.57	53.82	62.32	70.82	79.32	
1400	12.85	21.35	25.60	29.85	34.10	38.35	42.60	46.85	51.10	55.35	63.85	72.35	80.85	
1500	14.38	22.87	27.12	31.37	35.62	39.87	44.12	48.37	52.62	56.87	65.37	73.87	82.37	
1600	15.90	24.40	28.65	32.90	37.15	41.40	45.65	49.90	54.15	58.40	66.90	75.40	83.90	
1700	17.43	25.93	30.17	34.42	38.67	42.92	47.17	51.42	55.67	59.92	68.42	76.92	85.42	
1800	18.95	27.45	31.70	35.95	40.20	44.45	48.70	52.95	57.20	61.45	69.95	78.45	86.95	
1900	20.48	28.98	33.22	37.47	41.72	45.97	50.22	54.47	58.72	62.97	71.47	79.97	88.47	
2000	22.00	30.50	34.75	39.00	43.25	47.50	51.75	56.00	60.25	64.50	73.00	81.50	90.00	
2100	23.53	32.03	36.27	40.52	44.77	49.02	53.27	57.52	61.77	66.02	74.52	83.02	91.52	
2200	25.05	33.55	37.80	42.05	46.30	50.55	54.80	59.05	63.30	67.55	76.05	84.55	93.05	
2300	26.57	35.07	39.32	43.57	47.82	52.07	56.32	60.57	64.82	69.07	77.57	86.07	94.57	
2400	28.10	36.60	40.85	45.10	49.35	53.60	57.85	62.10	66.35	70.60	79.10	87.60	96.10	
2500	29.62	38.13	42.37	46.62	50.87	55.12	59.37	63.62	67.87	72.12	80.62	89.12	97.62	

TABLE 6. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$4.50 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.090 PER 0.1% PER CWT.)

	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	OCCULAR DEVIATION FROM BREED AVERAGE													
-400	-14.40	-5.40	-0.90	3.60	8.10	12.60	17.10	21.60	26.10	30.60	39.60	48.60	57.60	
-300	-13.05	-4.05	0.45	4.95	9.45	13.95	18.45	22.95	27.45	31.95	40.95	49.95	58.95	
-200	-11.70	-2.70	1.80	6.30	10.80	15.30	19.80	24.30	28.80	33.30	42.30	51.30	60.30	
-100	-10.35	-1.35	3.15	7.65	12.15	16.65	21.15	25.65	30.15	34.65	43.65	52.65	61.65	
0	-9.00	0.0	4.50	9.00	13.50	18.00	22.50	27.00	31.50	36.00	45.00	54.00	63.00	
100	-7.65	1.35	5.85	10.35	14.85	19.35	23.85	28.35	32.85	37.35	46.35	55.35	64.35	
200	-6.30	2.70	7.20	11.70	16.20	20.70	25.20	29.70	34.20	38.70	47.70	56.70	65.70	
300	-4.95	4.05	8.55	13.05	17.55	22.05	26.55	31.05	35.55	40.05	49.05	58.05	67.05	
400	-3.60	5.40	9.90	14.40	18.90	23.40	27.90	32.40	36.90	41.40	50.40	59.40	68.40	
500	-2.25	6.75	11.25	15.75	20.25	24.75	29.25	33.75	38.25	42.75	51.75	60.75	69.75	
600	-0.90	8.10	12.60	17.10	21.60	26.10	30.60	35.10	39.60	44.10	53.10	62.10	71.10	
700	0.45	9.45	13.95	18.45	22.95	27.45	31.95	36.45	40.95	45.45	54.45	63.45	72.45	
800	1.80	10.80	15.30	19.80	24.30	28.80	33.30	37.80	42.30	46.80	55.80	64.80	73.80	
900	3.15	12.15	16.65	21.15	25.65	30.15	34.65	39.15	43.65	48.15	57.15	66.15	75.15	
1000	4.50	13.50	18.00	22.50	27.00	31.50	36.00	40.50	45.00	49.50	58.50	67.50	76.50	
1100	5.85	14.85	19.35	23.85	28.35	32.85	37.35	41.85	46.35	50.85	59.85	68.85	77.85	
1200	7.20	16.20	20.70	25.20	29.70	34.20	38.70	43.20	47.70	52.20	61.20	70.20	79.20	
1300	8.55	17.55	22.05	26.55	31.05	35.55	40.05	44.55	49.05	53.55	62.55	71.55	80.55	
1400	9.90	18.90	23.40	27.90	32.40	36.90	41.40	45.90	50.40	54.90	63.90	72.90	81.90	
1500	11.25	20.25	24.75	29.25	33.75	38.25	42.75	47.25	51.75	56.25	65.25	74.25	83.25	
1600	12.60	21.60	26.10	30.60	35.10	39.60	44.10	48.60	53.10	57.60	66.60	75.60	84.60	
1700	13.95	22.95	27.45	31.95	36.45	40.95	45.45	49.95	54.45	58.95	67.95	76.95	85.95	
1800	15.30	24.30	28.80	33.30	37.80	42.30	46.80	51.30	55.80	60.30	69.30	78.30	87.30	
1900	16.65	25.65	30.15	34.65	39.15	43.65	48.15	52.65	57.15	61.65	70.65	79.65	88.65	
2000	18.00	27.00	31.50	36.00	40.50	45.00	49.50	54.00	58.50	63.00	72.00	81.00	90.00	
2100	19.35	28.35	32.85	37.35	41.85	46.35	50.85	55.35	59.85	64.35	73.35	82.35	91.35	
2200	20.70	29.70	34.20	38.70	43.20	47.70	52.20	56.70	61.20	65.70	74.70	83.70	92.70	
2300	22.05	31.05	35.55	40.05	44.55	49.05	53.55	58.05	62.55	67.05	76.05	85.05	94.05	
2400	23.40	32.40	36.90	41.40	45.90	50.40	54.90	59.40	63.90	68.40	77.40	86.40	95.40	
2500	24.75	33.75	38.25	42.75	47.25	51.75	56.25	60.75	65.25	69.75	78.75	87.75	96.75	

TABLE 7. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$5.00 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.070 PER 0.1% PER CWT.)

PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	OCCULAR DEVIATION FROM BREED AVERAGE													
-400	-17.20	-10.20	-6.70	-3.20	0.30	3.80	7.30	10.80	14.30	17.80	24.80	31.80	38.80	
-300	-14.65	-7.65	-4.15	-0.65	2.85	6.35	9.85	13.35	16.85	20.35	27.35	34.35	41.35	
-200	-12.10	-5.10	-1.60	1.90	5.40	8.90	12.40	15.90	19.40	22.90	29.90	36.90	43.90	
-100	-9.55	-2.55	0.95	4.45	7.95	11.45	14.95	18.45	21.95	25.45	32.45	39.45	46.45	
0	-7.00	0.0	3.50	7.00	10.50	14.00	17.50	21.00	24.50	28.00	35.00	42.00	49.00	
100	-4.45	2.55	6.05	9.55	13.05	16.55	20.05	23.55	27.05	30.55	37.55	44.55	51.55	
200	-1.90	5.10	8.60	12.10	15.60	19.10	22.60	26.10	29.60	33.10	40.10	47.10	54.10	
300	0.65	7.65	11.15	14.65	18.15	21.65	25.15	28.65	32.15	35.65	42.65	49.65	56.65	
400	3.20	10.20	13.70	17.20	20.70	24.20	27.70	31.20	34.70	38.20	45.20	52.20	59.20	
500	5.75	12.75	16.25	19.75	23.25	26.75	30.25	33.75	37.25	40.75	47.75	54.75	61.75	
600	8.30	15.30	18.80	22.30	25.80	29.30	32.80	36.30	39.80	43.30	50.30	57.30	64.30	
700	10.85	17.85	21.35	24.85	28.35	31.85	35.35	38.85	42.35	45.85	52.85	59.85	66.85	
800	13.40	20.40	23.90	27.40	30.90	34.40	37.90	41.40	44.90	48.40	55.40	62.40	69.40	
900	15.95	22.95	26.45	29.95	33.45	36.95	40.45	43.95	47.45	50.95	57.95	64.95	71.95	
1000	18.50	25.50	29.00	32.50	36.00	39.50	43.00	46.50	50.00	53.50	60.50	67.50	74.50	
1100	21.05	28.05	31.55	35.05	38.55	42.05	45.55	49.05	52.55	56.05	63.05	70.05	77.05	
1200	23.60	30.60	34.10	37.60	41.10	44.60	48.10	51.60	55.10	58.60	65.60	72.60	79.60	
1300	26.15	33.15	36.65	40.15	43.65	47.15	50.65	54.15	57.65	61.15	68.15	75.15	82.15	
1400	28.70	35.70	39.20	42.70	46.20	49.70	53.20	56.70	60.20	63.70	70.70	77.70	84.70	
1500	31.25	38.25	41.75	45.25	48.75	52.25	55.75	59.25	62.75	66.25	73.25	80.25	87.25	
1600	33.80	40.80	44.30	47.80	51.30	54.80	58.30	61.80	65.30	68.80	75.80	82.80	89.80	
1700	36.35	43.35	46.85	50.35	53.85	57.35	60.85	64.35	67.85	71.35	78.35	85.35	92.35	
1800	38.90	45.90	49.40	52.90	56.40	59.90	63.40	66.90	70.40	73.90	80.90	87.90	94.90	
1900	41.45	48.45	51.95	55.45	58.95	62.45	65.95	69.45	72.95	76.45	83.45	90.45	97.45	
2000	44.00	51.00	54.50	58.00	61.50	65.00	68.50	72.00	75.50	79.00	86.00	93.00	100.00	
2100	46.55	53.55	57.05	60.55	64.05	67.55	71.05	74.55	78.05	81.55	88.55	95.55	102.55	
2200	49.10	56.10	59.60	63.10	66.60	70.10	73.60	77.10	80.60	84.10	91.10	98.10	105.10	
2300	51.65	58.65	62.15	65.65	69.15	72.65	76.15	79.65	83.15	86.65	93.65	100.65	107.65	
2400	54.20	61.20	64.70	68.20	71.70	75.20	78.70	82.20	85.70	89.20	96.20	103.20	110.20	
2500	56.75	63.75	67.25	70.75	74.25	77.75	81.25	84.75	88.25	91.75	98.75	105.75	112.75	



TABLE 8. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$5.00 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.075 PER 0.1% PER CWT.)

	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	DOLLAR DEVIATION FROM BREED AVERAGE													
-400	-17.00	-9.50	-5.75	-2.00	1.75	5.50	9.25	13.00	16.75	20.50	28.00	35.50	43.00	
-300	-14.62	-7.13	-3.38	0.37	4.12	7.87	11.62	15.37	19.12	22.87	30.37	37.87	45.37	
-200	-12.25	-4.75	-1.00	2.75	6.50	10.25	14.00	17.75	21.50	25.25	32.75	40.25	47.75	
-100	-9.87	-2.38	1.37	5.12	8.87	12.62	16.37	20.12	23.87	27.62	35.12	42.62	50.12	
0	-7.50	0.0	3.75	7.50	11.25	15.00	18.75	22.50	26.25	30.00	37.50	45.00	52.50	
100	-5.12	2.38	6.12	9.87	13.62	17.37	21.12	24.87	28.62	32.37	39.87	47.37	54.87	
200	-2.75	4.75	8.50	12.25	16.00	19.75	23.50	27.25	31.00	34.75	42.25	49.75	57.25	
300	-0.37	7.13	10.88	14.62	18.37	22.12	25.87	29.62	33.37	37.12	44.62	52.12	59.62	
400	2.00	9.50	13.25	17.00	20.75	24.50	28.25	32.00	35.75	39.50	47.00	54.50	62.00	
500	4.38	11.88	15.63	19.37	23.12	26.87	30.62	34.37	38.12	41.87	49.37	56.87	64.37	
600	6.75	14.25	18.00	21.75	25.50	29.25	33.00	36.75	40.50	44.25	51.75	59.25	66.75	
700	9.13	16.62	20.37	24.12	27.87	31.62	35.37	39.12	42.87	46.62	54.12	61.62	69.12	
800	11.50	19.00	22.75	26.50	30.25	34.00	37.75	41.50	45.25	49.00	56.50	64.00	71.50	
900	13.88	21.37	25.12	28.87	32.62	36.37	40.12	43.87	47.62	51.37	58.87	66.37	73.87	
1000	16.25	23.75	27.50	31.25	35.00	38.75	42.50	46.25	50.00	53.75	61.25	68.75	76.25	
1100	18.62	26.12	29.87	33.62	37.37	41.12	44.87	48.62	52.37	56.12	63.62	71.12	78.62	
1200	21.00	28.50	32.25	36.00	39.75	43.50	47.25	51.00	54.75	58.50	66.00	73.50	81.00	
1300	23.37	30.87	34.62	38.37	42.12	45.87	49.62	53.37	57.12	60.87	68.37	75.87	83.37	
1400	25.75	33.25	37.00	40.75	44.50	48.25	52.00	55.75	59.50	63.25	70.75	78.25	85.75	
1500	28.13	35.63	39.38	43.13	46.88	50.63	54.38	58.12	61.88	65.62	73.12	80.62	88.12	
1600	30.50	38.00	41.75	45.50	49.25	53.00	56.75	60.50	64.25	68.00	75.50	83.00	90.50	
1700	32.88	40.38	44.13	47.88	51.63	55.38	59.13	62.87	66.63	70.37	77.87	85.37	92.87	
1800	35.25	42.75	46.50	50.25	54.00	57.75	61.50	65.25	69.00	72.75	80.25	87.75	95.25	
1900	37.63	45.13	48.88	52.63	56.38	60.13	63.88	67.62	71.38	75.12	82.62	90.12	97.62	
2000	40.00	47.50	51.25	55.00	58.75	62.50	66.25	70.00	73.75	77.50	85.00	92.50	100.00	
2100	42.38	49.88	53.63	57.38	61.13	64.88	68.63	72.37	76.13	79.87	87.37	94.87	102.37	
2200	44.75	52.25	56.00	59.75	63.50	67.25	71.00	74.75	78.50	82.25	89.75	97.25	104.75	
2300	47.13	54.63	58.38	62.13	65.88	69.63	73.38	77.12	80.88	84.62	92.12	99.62	107.12	
2400	49.50	57.00	60.75	64.50	68.25	72.00	75.75	79.50	83.25	87.00	94.50	102.00	109.50	
2500	51.88	59.38	63.13	66.88	70.63	74.38	78.13	81.87	85.63	89.37	96.87	104.37	111.87	

TABLE 9. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$5.00 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.080 PER 0.1% PER CWT.)

PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	DOLLAR DEVIATION FROM BREED AVERAGE													
-400	-16.80	-8.80	-4.80	-0.80	3.20	7.20	11.20	15.20	19.20	23.20	31.20	39.20	47.20	
-300	-14.60	-6.60	-2.60	1.40	5.40	9.40	13.40	17.40	21.40	25.40	33.40	41.40	49.40	
-200	-12.40	-4.40	-0.40	3.60	7.60	11.60	15.60	19.60	23.60	27.60	35.60	43.60	51.60	
-100	-10.20	-2.20	1.80	5.80	9.80	13.80	17.80	21.80	25.80	29.80	37.80	45.80	53.80	
0	-8.00	0.0	4.00	8.00	12.00	16.00	20.00	24.00	28.00	32.00	40.00	48.00	56.00	
100	-5.80	2.20	6.20	10.20	14.20	18.20	22.20	26.20	30.20	34.20	42.20	50.20	58.20	
200	-3.60	4.40	8.40	12.40	16.40	20.40	24.40	28.40	32.40	36.40	44.40	52.40	60.40	
300	-1.40	6.60	10.60	14.60	18.60	22.60	26.60	30.60	34.60	38.60	46.60	54.60	62.60	
400	0.80	8.80	12.80	16.80	20.80	24.80	28.80	32.80	36.80	40.80	48.80	56.80	64.80	
500	3.00	11.00	15.00	19.00	23.00	27.00	31.00	35.00	39.00	43.00	51.00	59.00	67.00	
600	5.20	13.20	17.20	21.20	25.20	29.20	33.20	37.20	41.20	45.20	53.20	61.20	69.20	
700	7.40	15.40	19.40	23.40	27.40	31.40	35.40	39.40	43.40	47.40	55.40	63.40	71.40	
800	9.60	17.60	21.60	25.60	29.60	33.60	37.60	41.60	45.60	49.60	57.60	65.60	73.60	
900	11.80	19.80	23.80	27.80	31.80	35.80	39.80	43.80	47.80	51.80	59.80	67.80	75.80	
1000	14.00	22.00	26.00	30.00	34.00	38.00	42.00	46.00	50.00	54.00	62.00	70.00	78.00	
1100	16.20	24.20	28.20	32.20	36.20	40.20	44.20	48.20	52.20	56.20	64.20	72.20	80.20	
1200	18.40	26.40	30.40	34.40	38.40	42.40	46.40	50.40	54.40	58.40	66.40	74.40	82.40	
1300	20.60	28.60	32.60	36.60	40.60	44.60	48.60	52.60	56.60	60.60	68.60	76.60	84.60	
1400	22.80	30.80	34.80	38.80	42.80	46.80	50.80	54.80	58.80	62.80	70.80	78.80	86.80	
1500	25.00	33.00	37.00	41.00	45.00	49.00	53.00	57.00	61.00	65.00	73.00	81.00	89.00	
1600	27.20	35.20	39.20	43.20	47.20	51.20	55.20	59.20	63.20	67.20	75.20	83.20	91.20	
1700	29.40	37.40	41.40	45.40	49.40	53.40	57.40	61.40	65.40	69.40	77.40	85.40	93.40	
1800	31.60	39.60	43.60	47.60	51.60	55.60	59.60	63.60	67.60	71.60	79.60	87.60	95.60	
1900	33.80	41.80	45.80	49.80	53.80	57.80	61.80	65.80	69.80	73.80	81.80	89.80	97.80	
2000	36.00	44.00	48.00	52.00	56.00	60.00	64.00	68.00	72.00	76.00	84.00	92.00	100.00	
2100	38.20	46.20	50.20	54.20	58.20	62.20	66.20	70.20	74.20	78.20	86.20	94.20	102.20	
2200	40.40	48.40	52.40	56.40	60.40	64.40	68.40	72.40	76.40	80.40	88.40	96.40	104.40	
2300	42.60	50.60	54.60	58.60	62.60	66.60	70.60	74.60	78.60	82.60	90.60	98.60	106.60	
2400	44.80	52.80	56.80	60.80	64.80	68.80	72.80	76.80	80.80	84.80	92.80	100.80	108.80	
2500	47.00	55.00	59.00	63.00	67.00	71.00	75.00	79.00	83.00	87.00	95.00	103.00	111.00	

TABLE 10. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$5.00 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.085 PER 0.1% PER CWT.)

PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	OCULAR DEVIATION FROM BREED AVERAGE													
-400	-16.60	-8.10	-3.85	0.40	4.65	8.90	13.15	17.40	21.65	25.90	34.40	42.90	51.40	
-300	-14.57	-6.08	-1.83	2.42	6.67	10.92	15.17	19.42	23.67	27.92	36.42	44.92	53.42	
-200	-12.55	-4.05	0.20	4.45	8.70	12.95	17.20	21.45	25.70	29.95	38.45	46.95	55.45	
-100	-10.52	-2.02	2.22	6.47	10.72	14.97	19.22	23.47	27.72	31.97	40.47	48.97	57.47	
0	-8.50	0.0	4.25	8.50	12.75	17.00	21.25	25.50	29.75	34.00	42.50	51.00	59.50	
100	-6.47	2.02	6.27	10.52	14.77	19.02	23.27	27.52	31.77	36.02	44.52	53.02	61.52	
200	-4.45	4.05	8.30	12.55	16.80	21.05	25.30	29.55	33.80	38.05	46.55	55.05	63.55	
300	-2.42	6.08	10.32	14.57	18.82	23.07	27.32	31.57	35.82	40.07	48.57	57.07	65.57	
400	-0.40	8.10	12.35	16.60	20.85	25.10	29.35	33.60	37.85	42.10	50.60	59.10	67.60	
500	1.63	10.13	14.37	18.62	22.87	27.12	31.37	35.62	39.87	44.12	52.62	61.12	69.62	
600	3.65	12.15	16.40	20.65	24.90	29.15	33.40	37.65	41.90	46.15	54.65	63.15	71.65	
700	5.68	14.18	18.42	22.67	26.92	31.17	35.42	39.67	43.92	48.17	56.67	65.17	73.67	
800	7.70	16.20	20.45	24.70	28.95	33.20	37.45	41.70	45.95	50.20	58.70	67.20	75.70	
900	9.72	18.22	22.47	26.72	30.97	35.22	39.47	43.72	47.97	52.22	60.72	69.22	77.72	
1000	11.75	20.25	24.50	28.75	33.00	37.25	41.50	45.75	50.00	54.25	62.75	71.25	79.75	
1100	13.77	22.27	26.52	30.77	35.02	39.27	43.52	47.77	52.02	56.27	64.77	73.27	81.77	
1200	15.80	24.30	28.55	32.80	37.05	41.30	45.55	49.80	54.05	58.30	66.80	75.30	83.80	
1300	17.82	26.32	30.57	34.82	39.07	43.32	47.57	51.82	56.07	60.32	68.82	77.32	85.82	
1400	19.85	28.35	32.60	36.85	41.10	45.35	49.60	53.85	58.10	62.35	70.85	79.35	87.85	
1500	21.88	30.38	34.62	38.87	43.12	47.37	51.62	55.87	60.12	64.37	72.87	81.37	89.87	
1600	23.90	32.40	36.65	40.90	45.15	49.40	53.65	57.90	62.15	66.40	74.90	83.40	91.90	
1700	25.93	34.43	38.67	42.92	47.17	51.42	55.67	59.92	64.17	68.42	76.92	85.42	93.92	
1800	27.95	36.45	40.70	44.95	49.20	53.45	57.70	61.95	66.20	70.45	78.95	87.45	95.95	
1900	29.98	38.48	42.72	46.97	51.22	55.47	59.72	63.97	68.22	72.47	80.97	89.47	97.97	
2000	32.00	40.50	44.75	49.00	53.25	57.50	61.75	66.00	70.25	74.50	83.00	91.50	100.00	
2100	34.02	42.52	46.77	51.02	55.27	59.52	63.77	68.02	72.27	76.52	85.02	93.52	102.02	
2200	36.05	44.55	48.80	53.05	57.30	61.55	65.80	70.05	74.30	78.55	87.05	95.55	104.05	
2300	38.07	46.57	50.82	55.07	59.32	63.57	67.82	72.07	76.32	80.57	89.07	97.57	106.07	
2400	40.10	48.60	52.85	57.10	61.35	65.60	69.85	74.10	78.35	82.60	91.10	99.60	108.10	
2500	42.12	50.63	54.87	59.12	63.37	67.62	71.87	76.12	80.37	84.62	93.12	101.62	110.12	

TABLE 11. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$5.00 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.090 PER 0.1% PER CWT.)

PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	DOLLAR DEVIATION FROM BREED AVERAGE													
-400	-16.40	-7.40	-2.90	1.60	6.10	10.60	15.10	19.60	24.10	28.60	37.60	46.60	55.60	
-300	-14.55	-5.55	-1.05	3.45	7.95	12.45	16.95	21.45	25.95	30.45	39.45	48.45	57.45	
-200	-12.70	-3.70	0.80	5.30	9.80	14.30	18.80	23.30	27.80	32.30	41.30	50.30	59.30	
-100	-10.85	-1.85	2.65	7.15	11.65	16.15	20.65	25.15	29.65	34.15	43.15	52.15	61.15	
0	-9.00	0.0	4.50	9.00	13.50	18.00	22.50	27.00	31.50	36.00	45.00	54.00	63.00	
100	-7.15	1.85	6.35	10.85	15.35	19.85	24.35	28.85	33.35	37.85	46.85	55.85	64.85	
200	-5.30	3.70	8.20	12.70	17.20	21.70	26.20	30.70	35.20	39.70	48.70	57.70	66.70	
300	-3.45	5.55	10.05	14.55	19.05	23.55	28.05	32.55	37.05	41.55	50.55	59.55	68.55	
400	-1.60	7.40	11.90	16.40	20.90	25.40	29.90	34.40	38.90	43.40	52.40	61.40	70.40	
500	0.25	9.25	13.75	18.25	22.75	27.25	31.75	36.25	40.75	45.25	54.25	63.25	72.25	
600	2.10	11.10	15.60	20.10	24.60	29.10	33.60	38.10	42.60	47.10	56.10	65.10	74.10	
700	3.95	12.95	17.45	21.95	26.45	30.95	35.45	39.95	44.45	48.95	57.95	66.95	75.95	
800	5.80	14.80	19.30	23.80	28.30	32.80	37.30	41.80	46.30	50.80	59.80	68.80	77.80	
900	7.65	16.65	21.15	25.65	30.15	34.65	39.15	43.65	48.15	52.65	61.65	70.65	79.65	
1000	9.50	18.50	23.00	27.50	32.00	36.50	41.00	45.50	50.00	54.50	63.50	72.50	81.50	
1100	11.35	20.35	24.85	29.35	33.85	38.35	42.85	47.35	51.85	56.35	65.35	74.35	83.35	
1200	13.20	22.20	26.70	31.20	35.70	40.20	44.70	49.20	53.70	58.20	67.20	76.20	85.20	
1300	15.05	24.05	28.55	33.05	37.55	42.05	46.55	51.05	55.55	60.05	69.05	78.05	87.05	
1400	16.90	25.90	30.40	34.90	39.40	43.90	48.40	52.90	57.40	61.90	70.90	79.90	88.90	
1500	18.75	27.75	32.25	36.75	41.25	45.75	50.25	54.75	59.25	63.75	72.75	81.75	90.75	
1600	20.60	29.60	34.10	38.60	43.10	47.60	52.10	56.60	61.10	65.60	74.60	83.60	92.60	
1700	22.45	31.45	35.95	40.45	44.95	49.45	53.95	58.45	62.95	67.45	76.45	85.45	94.45	
1800	24.30	33.30	37.80	42.30	46.80	51.30	55.80	60.30	64.80	69.30	78.30	87.30	96.30	
1900	26.15	35.15	39.65	44.15	48.65	53.15	57.65	62.15	66.65	71.15	80.15	89.15	98.15	
2000	28.00	37.00	41.50	46.00	50.50	55.00	59.50	64.00	68.50	73.00	82.00	91.00	100.00	
2100	29.85	38.85	43.35	47.85	52.35	56.85	61.35	65.85	70.35	74.85	83.85	92.85	101.85	
2200	31.70	40.70	45.20	49.70	54.20	58.70	63.20	67.70	72.20	76.70	85.70	94.70	103.70	
2300	33.55	42.55	47.05	51.55	56.05	60.55	65.05	69.55	74.05	78.55	87.55	96.55	105.55	
2400	35.40	44.40	48.90	53.40	57.90	62.40	66.90	71.40	75.90	80.40	89.40	98.40	107.40	
2500	37.25	46.25	50.75	55.25	59.75	64.25	68.75	73.25	77.75	82.25	91.25	100.25	109.25	



TABLE 12. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$5.50 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.070 PER 0.1% PER CWT.)

PRED.OIFF. OR COW INDEX FOR MILK (LBS.)	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)												
	-10	0	5	10	15	20	25	30	35	40	50	60	70
	DOLLAR DEVIATION FROM BREED AVERAGE												
-400	-19.20	-12.20	-8.70	-5.20	-1.70	1.80	5.30	8.80	12.30	15.80	22.80	29.80	36.80
-300	-16.15	-9.15	-5.65	-2.15	1.35	4.85	8.35	11.85	15.35	18.85	25.85	32.85	39.85
-200	-13.10	-6.10	-2.60	0.90	4.40	7.90	11.40	14.90	18.40	21.90	28.90	35.90	42.90
-100	-10.05	-3.05	0.45	3.95	7.45	10.95	14.45	17.95	21.45	24.95	31.95	38.95	45.95
0	-7.00	0.0	3.50	7.00	10.50	14.00	17.50	21.00	24.50	28.00	35.00	42.00	49.00
100	-3.95	3.05	6.55	10.05	13.55	17.05	20.55	24.05	27.55	31.05	38.05	45.05	52.05
200	-0.90	6.10	9.60	13.10	16.60	20.10	23.60	27.10	30.60	34.10	41.10	48.10	55.10
300	2.15	9.15	12.65	16.15	19.65	23.15	26.65	30.15	33.65	37.15	44.15	51.15	58.15
400	5.20	12.20	15.70	19.20	22.70	26.20	29.70	33.20	36.70	40.20	47.20	54.20	61.20
500	8.25	15.25	18.75	22.25	25.75	29.25	32.75	36.25	39.75	43.25	50.25	57.25	64.25
600	11.30	18.30	21.80	25.30	28.80	32.30	35.80	39.30	42.80	46.30	53.30	60.30	67.30
700	14.35	21.35	24.85	28.35	31.85	35.35	38.85	42.35	45.85	49.35	56.35	63.35	70.35
800	17.40	24.40	27.90	31.40	34.90	38.40	41.90	45.40	48.90	52.40	59.40	66.40	73.40
900	20.45	27.45	30.95	34.45	37.95	41.45	44.95	48.45	51.95	55.45	62.45	69.45	76.45
1000	23.50	30.50	34.00	37.50	41.00	44.50	48.00	51.50	55.00	58.50	65.50	72.50	79.50
1100	26.55	33.55	37.05	40.55	44.05	47.55	51.05	54.55	58.05	61.55	68.55	75.55	82.55
1200	29.60	36.60	40.10	43.60	47.10	50.60	54.10	57.60	61.10	64.60	71.60	78.60	85.60
1300	32.65	39.65	43.15	46.65	50.15	53.65	57.15	60.65	64.15	67.65	74.65	81.65	88.65
1400	35.70	42.70	46.20	49.70	53.20	56.70	60.20	63.70	67.20	70.70	77.70	84.70	91.70
1500	38.75	45.75	49.25	52.75	56.25	59.75	63.25	66.75	70.25	73.75	80.75	87.75	94.75
1600	41.80	48.80	52.30	55.80	59.30	62.80	66.30	69.80	73.30	76.80	83.80	90.80	97.80
1700	44.85	51.85	55.35	58.85	62.35	65.85	69.35	72.85	76.35	79.85	86.85	93.85	100.85
1800	47.90	54.90	58.40	61.90	65.40	68.90	72.40	75.90	79.40	82.90	89.90	96.90	103.90
1900	50.95	57.95	61.45	64.95	68.45	71.95	75.45	78.95	82.45	85.95	92.95	99.95	106.95
2000	54.00	61.00	64.50	68.00	71.50	75.00	78.50	82.00	85.50	89.00	96.00	103.00	110.00
2100	57.05	64.05	67.55	71.05	74.55	78.05	81.55	85.05	88.55	92.05	99.05	106.05	113.05
2200	60.10	67.10	70.60	74.10	77.60	81.10	84.60	88.10	91.60	95.10	102.10	109.10	116.10
2300	63.15	70.15	73.65	77.15	80.65	84.15	87.65	91.15	94.65	98.15	105.15	112.15	119.15
2400	66.20	73.20	76.70	80.20	83.70	87.20	90.70	94.20	97.70	101.20	108.20	115.20	122.20
2500	69.25	76.25	79.75	83.25	86.75	90.25	93.75	97.25	100.75	104.25	111.25	118.25	125.25

TABLE 13. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$5.50 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.075 PER 0.1% PER CWT.)

PRED.OIFF. OR COW INDEX FOR MILK (LBS.)	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)												
	-10	0	5	10	15	20	25	30	35	40	50	60	70
	DOLLAR DEVIATION FROM BREED AVERAGE												
-400	-19.00	-11.50	-7.75	-4.00	-0.25	3.50	7.25	11.00	14.75	18.50	26.00	33.50	41.00
-300	-16.12	-8.63	-4.88	-1.13	2.62	6.37	10.12	13.87	17.62	21.37	28.87	36.37	43.87
-200	-13.25	-5.75	-2.00	1.75	5.50	9.25	13.00	16.75	20.50	24.25	31.75	39.25	46.75
-100	-10.37	-2.88	0.87	4.62	8.37	12.12	15.87	19.62	23.37	27.12	34.62	42.12	49.62
0	-7.50	0.0	3.75	7.50	11.25	15.00	18.75	22.50	26.25	30.00	37.50	45.00	52.50
100	-4.62	2.88	6.62	10.37	14.12	17.87	21.62	25.37	29.12	32.87	40.37	47.87	55.37
200	-1.75	5.75	9.50	13.25	17.00	20.75	24.50	28.25	32.00	35.75	43.25	50.75	58.25
300	1.13	8.63	12.38	16.12	19.87	23.62	27.37	31.12	34.87	38.62	46.12	53.62	61.12
400	4.00	11.50	15.25	19.00	22.75	26.50	30.25	34.00	37.75	41.50	49.00	56.50	64.00
500	6.88	14.38	18.12	21.87	25.62	29.37	33.12	36.87	40.62	44.37	51.87	59.37	66.87
600	9.75	17.25	21.00	24.75	28.50	32.25	36.00	39.75	43.50	47.25	54.75	62.25	69.75
700	12.63	20.12	23.87	27.62	31.37	35.12	38.87	42.62	46.37	50.12	57.62	65.12	72.62
800	15.50	23.00	26.75	30.50	34.25	38.00	41.75	45.50	49.25	53.00	60.50	68.00	75.50
900	18.37	25.87	29.62	33.37	37.12	40.87	44.62	48.37	52.12	55.87	63.37	70.87	78.37
1000	21.25	28.75	32.50	36.25	40.00	43.75	47.50	51.25	55.00	58.75	66.25	73.75	81.25
1100	24.12	31.63	35.37	39.12	42.87	46.62	50.37	54.12	57.87	61.62	69.12	76.62	84.12
1200	27.00	34.50	38.25	42.00	45.75	49.50	53.25	57.00	60.75	64.50	72.00	79.50	87.00
1300	29.88	37.38	41.13	44.87	48.63	52.38	56.12	59.87	63.63	67.37	74.87	82.37	89.87
1400	32.75	40.25	44.00	47.75	51.50	55.25	59.00	62.75	66.50	70.25	77.75	85.25	92.75
1500	35.63	43.13	46.88	50.63	54.38	58.13	61.88	65.62	69.38	73.12	80.62	88.12	95.62
1600	38.50	46.00	49.75	53.50	57.25	61.00	64.75	68.50	72.25	76.00	83.50	91.00	98.50
1700	41.38	48.88	52.63	56.38	60.13	63.88	67.63	71.37	75.13	78.87	86.37	93.87	101.37
1800	44.25	51.75	55.50	59.25	63.00	66.75	70.50	74.25	78.00	81.75	89.25	96.75	104.25
1900	47.13	54.63	58.38	62.13	65.88	69.63	73.38	77.12	80.88	84.62	92.12	99.62	107.12
2000	50.00	57.50	61.25	65.00	68.75	72.50	76.25	80.00	83.75	87.50	95.00	102.50	110.00
2100	52.88	60.38	64.13	67.88	71.63	75.38	79.13	82.87	86.63	90.37	97.87	105.37	112.87
2200	55.75	63.25	67.00	70.75	74.50	78.25	82.00	85.75	89.50	93.25	100.75	108.25	115.75
2300	58.63	66.13	69.88	73.63	77.38	81.13	84.88	88.63	92.38	96.13	103.63	111.13	118.63
2400	61.50	69.00	72.75	76.50	80.25	84.00	87.75	91.50	95.25	99.00	106.50	114.00	121.50
2500	64.38	71.88	75.63	79.38	83.13	86.88	90.63	94.38	98.13	101.87	109.37	116.87	124.37

TABLE 14. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO  
PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$5.50 PER  
HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.080 PER 0.1% PER CWT.)

PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)

PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	-10	0	5	10	15	20	25	30	35	40	50	60	70
	DOLLAR DEVIATION FROM BREED AVERAGE												
-400	-18.80	-10.80	-6.80	-2.80	1.20	5.20	9.20	13.20	17.20	21.20	29.20	37.20	45.20
-300	-16.10	-8.10	-4.10	-0.10	3.90	7.90	11.90	15.90	19.90	23.90	31.90	39.90	47.90
-200	-13.40	-5.40	-1.40	2.60	6.60	10.60	14.60	18.60	22.60	26.60	34.60	42.60	50.60
-100	-10.70	-2.70	1.30	5.30	9.30	13.30	17.30	21.30	25.30	29.30	37.30	45.30	53.30
0	-8.00	0.0	4.00	8.00	12.00	16.00	20.00	24.00	28.00	32.00	40.00	48.00	56.00
100	-5.30	2.70	6.70	10.70	14.70	18.70	22.70	26.70	30.70	34.70	42.70	50.70	58.70
200	-2.60	5.40	9.40	13.40	17.40	21.40	25.40	29.40	33.40	37.40	45.40	53.40	61.40
300	0.10	8.10	12.10	16.10	20.10	24.10	28.10	32.10	36.10	40.10	48.10	56.10	64.10
400	2.80	10.80	14.80	18.80	22.80	26.80	30.80	34.80	38.80	42.80	50.80	58.80	66.80
500	5.50	13.50	17.50	21.50	25.50	29.50	33.50	37.50	41.50	45.50	53.50	61.50	69.50
600	8.20	16.20	20.20	24.20	28.20	32.20	36.20	40.20	44.20	48.20	56.20	64.20	72.20
700	10.90	18.90	22.90	26.90	30.90	34.90	38.90	42.90	46.90	50.90	58.90	66.90	74.90
800	13.60	21.60	25.60	29.60	33.60	37.60	41.60	45.60	49.60	53.60	61.60	69.60	77.60
900	16.30	24.30	28.30	32.30	36.30	40.30	44.30	48.30	52.30	56.30	64.30	72.30	80.30
1000	19.00	27.00	31.00	35.00	39.00	43.00	47.00	51.00	55.00	59.00	67.00	75.00	83.00
1100	21.70	29.70	33.70	37.70	41.70	45.70	49.70	53.70	57.70	61.70	69.70	77.70	85.70
1200	24.40	32.40	36.40	40.40	44.40	48.40	52.40	56.40	60.40	64.40	72.40	80.40	88.40
1300	27.10	35.10	39.10	43.10	47.10	51.10	55.10	59.10	63.10	67.10	75.10	83.10	91.10
1400	29.80	37.80	41.80	45.80	49.80	53.80	57.80	61.80	65.80	69.80	77.80	85.80	93.80
1500	32.50	40.50	44.50	48.50	52.50	56.50	60.50	64.50	68.50	72.50	80.50	88.50	96.50
1600	35.20	43.20	47.20	51.20	55.20	59.20	63.20	67.20	71.20	75.20	83.20	91.20	99.20
1700	37.90	45.90	49.90	53.90	57.90	61.90	65.90	69.90	73.90	77.90	85.90	93.90	101.90
1800	40.60	48.60	52.60	56.60	60.60	64.60	68.60	72.60	76.60	80.60	88.60	96.60	104.60
1900	43.30	51.30	55.30	59.30	63.30	67.30	71.30	75.30	79.30	83.30	91.30	99.30	107.30
2000	46.00	54.00	58.00	62.00	66.00	70.00	74.00	78.00	82.00	86.00	94.00	102.00	110.00
2100	48.70	56.70	60.70	64.70	68.70	72.70	76.70	80.70	84.70	88.70	96.70	104.70	112.70
2200	51.40	59.40	63.40	67.40	71.40	75.40	79.40	83.40	87.40	91.40	99.40	107.40	115.40
2300	54.10	62.10	66.10	70.10	74.10	78.10	82.10	86.10	90.10	94.10	102.10	110.10	118.10
2400	56.80	64.80	68.80	72.80	76.80	80.80	84.80	88.80	92.80	96.80	104.80	112.80	120.80
2500	59.50	67.50	71.50	75.50	79.50	83.50	87.50	91.50	95.50	99.50	107.50	115.50	123.50

TABLE 15. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO  
PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$5.50 PER  
HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.085 PER 0.1% PER CWT.)

PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)

PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	-10	0	5	10	15	20	25	30	35	40	50	60	70
	DOLLAR DEVIATION FROM BREED AVERAGE												
-400	-18.60	-10.10	-5.85	-1.60	2.65	6.90	11.15	15.40	19.65	23.90	32.40	40.90	49.40
-300	-16.07	-7.58	-3.33	0.62	5.17	9.42	13.67	17.92	22.17	26.42	34.92	43.42	51.92
-200	-13.55	-5.05	-0.80	3.45	7.70	11.95	16.20	20.45	24.70	28.95	37.45	45.95	54.45
-100	-11.02	-2.53	1.72	5.57	10.22	14.47	18.72	22.97	27.22	31.47	39.97	48.47	56.97
0	-8.50	0.0	4.25	8.50	12.75	17.00	21.25	25.50	29.75	34.00	42.50	51.00	59.50
100	-5.97	2.53	6.77	11.02	15.27	19.52	23.77	28.02	32.27	36.52	45.02	53.52	62.02
200	-3.45	5.05	9.30	13.55	17.80	22.05	26.30	30.55	34.80	39.05	47.55	56.05	64.55
300	-0.92	7.58	11.83	16.07	20.32	24.57	28.82	33.07	37.32	41.57	50.07	58.57	67.07
400	1.60	10.10	14.35	18.60	22.85	27.10	31.35	35.60	39.85	44.10	52.60	61.10	69.60
500	4.13	12.63	16.87	21.12	25.37	29.62	33.87	38.12	42.37	46.62	55.12	63.62	72.12
600	6.65	15.15	19.40	23.65	27.90	32.15	36.40	40.65	44.90	49.15	57.65	66.15	74.65
700	9.18	17.68	21.92	26.17	30.42	34.67	38.92	43.17	47.42	51.67	60.17	68.67	77.17
800	11.70	20.20	24.45	28.70	32.95	37.20	41.45	45.70	49.95	54.20	62.70	71.20	79.70
900	14.22	22.72	26.97	31.22	35.47	39.72	43.97	48.22	52.47	56.72	65.22	73.72	82.22
1000	16.75	25.25	29.50	33.75	38.00	42.25	46.50	50.75	55.00	59.25	67.75	76.25	84.75
1100	19.27	27.77	32.02	36.27	40.52	44.77	49.02	53.27	57.52	61.77	70.27	78.77	87.27
1200	21.80	30.30	34.55	38.80	43.05	47.30	51.55	55.80	60.05	64.30	72.80	81.30	89.80
1300	24.32	32.82	37.07	41.32	45.57	49.82	54.07	58.32	62.57	66.82	75.32	83.82	92.32
1400	26.85	35.35	39.60	43.85	48.10	52.35	56.60	60.85	65.10	69.35	77.85	86.35	94.85
1500	29.37	37.88	42.12	46.37	50.62	54.87	59.12	63.37	67.62	71.87	80.37	88.87	97.37
1600	31.90	40.40	44.65	48.90	53.15	57.40	61.65	65.90	70.15	74.40	82.90	91.40	99.90
1700	34.43	42.93	47.17	51.42	55.67	59.92	64.17	68.42	72.67	76.92	85.42	93.92	102.42
1800	36.95	45.45	49.70	53.95	58.20	62.45	66.70	70.95	75.20	79.45	87.95	96.45	104.95
1900	39.48	47.98	52.22	56.47	60.72	64.97	69.22	73.47	77.72	81.97	90.47	98.97	107.47
2000	42.00	50.50	54.75	59.00	63.25	67.50	71.75	76.00	80.25	84.50	93.00	101.50	110.00
2100	44.53	53.03	57.27	61.52	65.77	70.02	74.27	78.52	82.77	87.02	95.52	104.02	112.52
2200	47.05	55.55	59.80	64.05	68.30	72.55	76.80	81.05	85.30	89.55	98.05	106.55	115.05
2300	49.58	58.08	62.32	66.57	70.82	75.07	79.32	83.57	87.82	92.07	100.57	109.07	117.57
2400	52.10	60.60	64.85	69.10	73.35	77.60	81.85	86.10	90.35	94.60	103.10	111.60	120.10
2500	54.63	63.13	67.38	71.63	75.88	80.13	84.38	88.63	92.88	97.13	105.63	114.13	122.63

TABLE 16. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO  
PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$5.50 PER  
HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.090 PER 0.1% PER CWT.)

PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	DOLLAR DEVIATION FROM BREED AVERAGE													
-400	-18.40	-9.40	-4.90	-0.40	4.10	8.60	13.10	17.60	22.10	26.60	35.60	44.60	53.60	
-300	-16.05	-7.05	-2.55	1.95	6.45	10.95	15.45	19.95	24.45	28.95	37.95	46.95	55.95	
-200	-13.70	-4.70	-0.20	4.30	8.80	13.30	17.80	22.30	26.80	31.30	40.30	49.30	58.30	
-100	-11.35	-2.35	2.15	6.65	11.15	15.65	20.15	24.65	29.15	33.65	42.65	51.65	60.65	
0	-9.00	0.0	4.50	9.00	13.50	18.00	22.50	27.00	31.50	36.00	45.00	54.00	63.00	
100	-6.65	2.35	6.85	11.35	15.85	20.35	24.85	29.35	33.85	38.35	47.35	56.35	65.35	
200	-4.30	4.70	9.20	13.70	18.20	22.70	27.20	31.70	36.20	40.70	49.70	58.70	67.70	
300	-1.95	7.05	11.55	16.05	20.55	25.05	29.55	34.05	38.55	43.05	52.05	61.05	70.05	
400	0.40	9.40	13.90	18.40	22.90	27.40	31.90	36.40	40.90	45.40	54.40	63.40	72.40	
500	2.75	11.75	16.25	20.75	25.25	29.75	34.25	38.75	43.25	47.75	56.75	65.75	74.75	
600	5.10	14.10	18.60	23.10	27.60	32.10	36.60	41.10	45.60	50.10	59.10	68.10	77.10	
700	7.45	16.45	20.95	25.45	29.95	34.45	38.95	43.45	47.95	52.45	61.45	70.45	79.45	
800	9.80	18.80	23.30	27.80	32.30	36.80	41.30	45.80	50.30	54.80	63.80	72.80	81.80	
900	12.15	21.15	25.65	30.15	34.65	39.15	43.65	48.15	52.65	57.15	66.15	75.15	84.15	
1000	14.50	23.50	28.00	32.50	37.00	41.50	46.00	50.50	55.00	59.50	68.50	77.50	86.50	
1100	16.85	25.85	30.35	34.85	39.35	43.85	48.35	52.85	57.35	61.85	70.85	79.85	88.85	
1200	19.20	28.20	32.70	37.20	41.70	46.20	50.70	55.20	59.70	64.20	73.20	82.20	91.20	
1300	21.55	30.55	35.05	39.55	44.05	48.55	53.05	57.55	62.05	66.55	75.55	84.55	93.55	
1400	23.90	32.90	37.40	41.90	46.40	50.90	55.40	59.90	64.40	68.90	77.90	86.90	95.90	
1500	26.25	35.25	39.75	44.25	48.75	53.25	57.75	62.25	66.75	71.25	80.25	89.25	98.25	
1600	28.60	37.60	42.10	46.60	51.10	55.60	60.10	64.60	69.10	73.60	82.60	91.60	100.60	
1700	30.95	39.95	44.45	48.95	53.45	57.95	62.45	66.95	71.45	75.95	84.95	93.95	102.95	
1800	33.30	42.30	46.80	51.30	55.80	60.30	64.80	69.30	73.80	78.30	87.30	96.30	105.30	
1900	35.65	44.65	49.15	53.65	58.15	62.65	67.15	71.65	76.15	80.65	89.65	98.65	107.65	
2000	38.00	47.00	51.50	56.00	60.50	65.00	69.50	74.00	78.50	83.00	92.00	101.00	110.00	
2100	40.35	49.35	53.85	58.35	62.85	67.35	71.85	76.35	80.85	85.35	94.35	103.35	112.35	
2200	42.70	51.70	56.20	60.70	65.20	69.70	74.20	78.70	83.20	87.70	96.70	105.70	114.70	
2300	45.05	54.05	58.55	63.05	67.55	72.05	76.55	81.05	85.55	90.05	99.05	108.05	117.05	
2400	47.40	56.40	60.90	65.40	69.90	74.40	78.90	83.40	87.90	92.40	101.40	110.40	119.40	
2500	49.75	58.75	63.25	67.75	72.25	76.75	81.25	85.75	90.25	94.75	103.75	112.75	121.75	

TABLE 17. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO  
PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$6.00 PER  
HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.070 PER 0.1% PER CWT.)

	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	DOLLAR DEVIATION FROM BREED AVERAGE													
-400	-21.20	-14.20	-10.70	-7.20	-3.70	-0.20	3.30	6.80	10.30	13.80	20.80	27.80	34.80	
-300	-17.65	-10.65	-7.15	-3.65	-0.15	3.35	6.85	10.35	13.85	17.35	24.35	31.35	38.35	
-200	-14.10	-7.10	-3.60	-0.10	3.40	6.90	10.40	13.90	17.40	20.90	27.90	34.90	41.90	
-100	-10.55	-3.55	-0.05	3.45	6.95	10.45	13.95	17.45	20.95	24.45	31.45	38.45	45.45	
0	-7.00	0.0	3.50	7.00	10.50	14.00	17.50	21.00	24.50	28.00	35.00	42.00	49.00	
100	-3.45	3.55	7.05	10.55	14.05	17.55	21.05	24.55	28.05	31.55	38.55	45.55	52.55	
200	0.10	7.10	10.60	14.10	17.60	21.10	24.60	28.10	31.60	35.10	42.10	49.10	56.10	
300	3.65	10.65	14.15	17.65	21.15	24.65	28.15	31.65	35.15	38.65	45.65	52.65	59.65	
400	7.20	14.20	17.70	21.20	24.70	28.20	31.70	35.20	38.70	42.20	49.20	56.20	63.20	
500	10.75	17.75	21.25	24.75	28.25	31.75	35.25	38.75	42.25	45.75	52.75	59.75	66.75	
600	14.30	21.30	24.80	28.30	31.80	35.30	38.80	42.30	45.80	49.30	56.30	63.30	70.30	
700	17.85	24.85	28.35	31.85	35.35	38.85	42.35	45.85	49.35	52.85	59.85	66.85	73.85	
800	21.40	28.40	31.90	35.40	38.90	42.40	45.90	49.40	52.90	56.40	63.40	70.40	77.40	
900	24.95	31.95	35.45	38.95	42.45	45.95	49.45	52.95	56.45	59.95	66.95	73.95	80.95	
1000	28.50	35.50	39.00	42.50	46.00	49.50	53.00	56.50	60.00	63.50	70.50	77.50	84.50	
1100	32.05	39.05	42.55	46.05	49.55	53.05	56.55	60.05	63.55	67.05	74.05	81.05	88.05	
1200	35.60	42.60	46.10	49.60	53.10	56.60	60.10	63.60	67.10	70.60	77.60	84.60	91.60	
1300	39.15	46.15	49.65	53.15	56.65	60.15	63.65	67.15	70.65	74.15	81.15	88.15	95.15	
1400	42.70	49.70	53.20	56.70	60.20	63.70	67.20	70.70	74.20	77.70	84.70	91.70	98.70	
1500	46.25	53.25	56.75	60.25	63.75	67.25	70.75	74.25	77.75	81.25	88.25	95.25	102.25	
1600	49.80	56.80	60.30	63.80	67.30	70.80	74.30	77.80	81.30	84.80	91.80	98.80	105.80	
1700	53.35	60.35	63.85	67.35	70.85	74.35	77.85	81.35	84.85	88.35	95.35	102.35	109.35	
1800	56.90	63.90	67.40	70.90	74.40	77.90	81.40	84.90	88.40	91.90	98.90	105.90	112.90	
1900	60.45	67.45	70.95	74.45	77.95	81.45	84.95	88.45	91.95	95.45	102.45	109.45	116.45	
2000	64.00	71.00	74.50	78.00	81.50	85.00	88.50	92.00	95.50	99.00	106.00	113.00	120.00	
2100	67.55	74.55	78.05	81.55	85.05	88.55	92.05	95.55	99.05	102.55	109.55	116.55	123.55	
2200	71.10	78.10	81.60	85.10	88.60	92.10	95.60	99.10	102.60	106.10	113.10	120.10	127.10	
2300	74.65	81.65	85.15	88.65	92.15	95.65	99.15	102.65	106.15	109.65	116.65	123.65	130.65	
2400	78.20	85.20	88.70	92.20	95.70	99.20	102.70	106.20	109.70	113.20	120.20	127.20	134.20	
2500	81.75	88.75	92.25	95.75	99.25	102.75	106.25	109.75	113.25	116.75	123.75	130.75	137.75	



TABLE 18. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$6.00 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.075 PER 0.1% PER CWT.)

	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	DOLLAR DEVIATION FROM BREED AVERAGE													
-400	-21.00	-13.50	-9.75	-6.00	-2.25	1.50	5.25	9.00	12.75	16.50	24.00	31.50	39.00	
-300	-17.62	-10.13	-6.38	-2.63	1.12	4.87	8.62	12.37	16.12	19.87	27.37	34.87	42.37	
-200	-14.25	-6.75	-3.00	0.75	4.50	8.25	12.00	15.75	19.50	23.25	30.75	38.25	45.75	
-100	-10.87	-3.38	0.37	4.12	7.87	11.62	15.37	19.12	22.87	26.62	34.12	41.62	49.12	
0	-7.50	0.0	3.75	7.50	11.25	15.00	18.75	22.50	26.25	30.00	37.50	45.00	52.50	
100	-4.12	3.38	7.12	10.87	14.62	18.37	22.12	25.87	29.62	33.37	40.87	48.37	55.87	
200	-0.75	6.75	10.50	14.25	18.00	21.75	25.50	29.25	33.00	36.75	44.25	51.75	59.25	
300	2.63	10.13	13.88	17.62	21.37	25.12	28.87	32.62	36.37	40.12	47.62	55.12	62.62	
400	6.00	13.50	17.25	21.00	24.75	28.50	32.25	36.00	39.75	43.50	51.00	58.50	66.00	
500	9.38	16.87	20.62	24.37	28.12	31.87	35.62	39.37	43.12	46.87	54.37	61.87	69.37	
600	12.75	20.25	24.00	27.75	31.50	35.25	39.00	42.75	46.50	50.25	57.75	65.25	72.75	
700	16.12	23.63	27.37	31.12	34.87	38.62	42.37	46.12	49.87	53.62	61.12	68.62	76.12	
800	19.50	27.00	30.75	34.50	38.25	42.00	45.75	49.50	53.25	57.00	64.50	72.00	79.50	
900	22.87	30.38	34.12	37.87	41.62	45.37	49.12	52.87	56.62	60.37	67.87	75.37	82.87	
1000	26.25	33.75	37.50	41.25	45.00	48.75	52.50	56.25	60.00	63.75	71.25	78.75	86.25	
1100	29.62	37.12	40.87	44.62	48.37	52.12	55.87	59.62	63.37	67.12	74.62	82.12	89.62	
1200	33.00	40.50	44.25	48.00	51.75	55.50	59.25	63.00	66.75	70.50	78.00	85.50	93.00	
1300	36.38	43.88	47.63	51.37	55.13	58.88	62.63	66.37	70.13	73.87	81.37	88.87	96.37	
1400	39.75	47.25	51.00	54.75	58.50	62.25	66.00	69.75	73.50	77.25	84.75	92.25	99.75	
1500	43.13	50.63	54.38	58.13	61.88	65.63	69.38	73.12	76.88	80.62	88.12	95.62	103.12	
1600	46.50	54.00	57.75	61.50	65.25	69.00	72.75	76.50	80.25	84.00	91.50	99.00	106.50	
1700	49.88	57.38	61.13	64.88	68.63	72.38	76.13	79.87	83.63	87.37	94.87	102.37	109.87	
1800	53.25	60.75	64.50	68.25	72.00	75.75	79.50	83.25	87.00	90.75	98.25	105.75	113.25	
1900	56.63	64.13	67.88	71.63	75.38	79.13	82.88	86.62	90.38	94.12	101.62	109.12	116.62	
2000	60.00	67.50	71.25	75.00	78.75	82.50	86.25	90.00	93.75	97.50	105.00	112.50	120.00	
2100	63.38	70.88	74.63	78.38	82.13	85.88	89.63	93.37	97.13	100.87	108.37	115.87	123.37	
2200	66.75	74.25	78.00	81.75	85.50	89.25	93.00	96.75	100.50	104.25	111.75	119.25	126.75	
2300	70.13	77.63	81.38	85.13	88.88	92.63	96.38	100.12	103.87	107.62	115.12	122.62	130.12	
2400	73.50	81.00	84.75	88.50	92.25	96.00	99.75	103.50	107.25	111.00	118.50	126.00	133.50	
2500	76.88	84.38	88.13	91.88	95.63	99.38	103.13	106.87	110.63	114.37	121.87	129.37	136.87	

TABLE 19. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$6.00 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.080 PER 0.1% PER CWT.)

	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	DOLLAR DEVIATION FROM BREED AVERAGE													
-400	-20.80	-12.80	-8.80	-4.80	-0.80	3.20	7.20	11.20	15.20	19.20	27.20	35.20	43.20	
-300	-17.60	-9.60	-5.60	-1.60	2.40	6.40	10.40	14.40	18.40	22.40	30.40	38.40	46.40	
-200	-14.40	-6.40	-2.40	1.60	5.60	9.60	13.60	17.60	21.60	25.60	33.60	41.60	49.60	
-100	-11.20	-3.20	0.80	4.80	8.80	12.80	16.80	20.80	24.80	28.80	36.80	44.80	52.80	
0	-8.00	0.0	4.00	8.00	12.00	16.00	20.00	24.00	28.00	32.00	40.00	48.00	56.00	
100	-4.80	3.20	7.20	11.20	15.20	19.20	23.20	27.20	31.20	35.20	43.20	51.20	59.20	
200	-1.60	6.40	10.40	14.40	18.40	22.40	26.40	30.40	34.40	38.40	46.40	54.40	62.40	
300	1.60	9.60	13.60	17.60	21.60	25.60	29.60	33.60	37.60	41.60	49.60	57.60	65.60	
400	4.80	12.80	16.80	20.80	24.80	28.80	32.80	36.80	40.80	44.80	52.80	60.80	68.80	
500	8.00	16.00	20.00	24.00	28.00	32.00	36.00	40.00	44.00	48.00	56.00	64.00	72.00	
600	11.20	19.20	23.20	27.20	31.20	35.20	39.20	43.20	47.20	51.20	59.20	67.20	75.20	
700	14.40	22.40	26.40	30.40	34.40	38.40	42.40	46.40	50.40	54.40	62.40	70.40	78.40	
800	17.60	25.60	29.60	33.60	37.60	41.60	45.60	49.60	53.60	57.60	65.60	73.60	81.60	
900	20.80	28.80	32.80	36.80	40.80	44.80	48.80	52.80	56.80	60.80	68.80	76.80	84.80	
1000	24.00	32.00	36.00	40.00	44.00	48.00	52.00	56.00	60.00	64.00	72.00	80.00	88.00	
1100	27.20	35.20	39.20	43.20	47.20	51.20	55.20	59.20	63.20	67.20	75.20	83.20	91.20	
1200	30.40	38.40	42.40	46.40	50.40	54.40	58.40	62.40	66.40	70.40	78.40	86.40	94.40	
1300	33.60	41.60	45.60	49.60	53.60	57.60	61.60	65.60	69.60	73.60	81.60	89.60	97.60	
1400	36.80	44.80	48.80	52.80	56.80	60.80	64.80	68.80	72.80	76.80	84.80	92.80	100.80	
1500	40.00	48.00	52.00	56.00	60.00	64.00	68.00	72.00	76.00	80.00	88.00	96.00	104.00	
1600	43.20	51.20	55.20	59.20	63.20	67.20	71.20	75.20	79.20	83.20	91.20	99.20	107.20	
1700	46.40	54.40	58.40	62.40	66.40	70.40	74.40	78.40	82.40	86.40	94.40	102.40	110.40	
1800	49.60	57.60	61.60	65.60	69.60	73.60	77.60	81.60	85.60	89.60	97.60	105.60	113.60	
1900	52.80	60.80	64.80	68.80	72.80	76.80	80.80	84.80	88.80	92.80	100.80	108.80	116.80	
2000	56.00	64.00	68.00	72.00	76.00	80.00	84.00	88.00	92.00	96.00	104.00	112.00	120.00	
2100	59.20	67.20	71.20	75.20	79.20	83.20	87.20	91.20	95.20	99.20	107.20	115.20	123.20	
2200	62.40	70.40	74.40	78.40	82.40	86.40	90.40	94.40	98.40	102.40	110.40	118.40	126.40	
2300	65.60	73.60	77.60	81.60	85.60	89.60	93.60	97.60	101.60	105.60	113.60	121.60	129.60	
2400	68.80	76.80	80.80	84.80	88.80	92.80	96.80	100.80	104.80	108.80	116.80	124.80	132.80	
2500	72.00	80.00	84.00	88.00	92.00	96.00	100.00	104.00	108.00	112.00	120.00	128.00	136.00	

TABLE 20. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$6.00 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.085 PER 0.1% PER CWT.)

PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)												
	-10	0	5	10	15	20	25	30	35	40	50	60	70
	DOLLAR DEVIATION FROM BREED AVERAGE												
-400	-20.60	-12.10	-7.85	-3.60	0.65	4.90	9.15	13.40	17.65	21.90	30.40	38.90	47.40
-300	-17.57	-9.08	-4.83	-0.58	3.67	7.92	12.17	16.42	20.67	24.92	33.42	41.92	50.42
-200	-14.55	-6.05	-1.80	2.45	6.70	10.95	15.20	19.45	23.70	27.95	36.45	44.95	53.45
-100	-11.52	-3.02	1.22	5.47	9.72	13.97	18.22	22.47	26.72	30.97	39.47	47.97	56.47
0	-8.50	0.0	4.25	8.50	12.75	17.00	21.25	25.50	29.75	34.00	42.50	51.00	59.50
100	-5.47	3.02	7.27	11.52	15.77	20.02	24.27	28.52	32.77	37.02	45.52	54.02	62.52
200	-2.45	6.05	10.30	14.55	18.80	23.05	27.30	31.55	35.80	40.05	48.55	57.05	65.55
300	0.58	9.08	13.32	17.57	21.82	26.07	30.32	34.57	38.82	43.07	51.57	60.07	68.57
400	3.60	12.10	16.35	20.60	24.85	29.10	33.35	37.60	41.85	46.10	54.60	63.10	71.60
500	6.63	15.13	19.37	23.62	27.87	32.12	36.37	40.62	44.87	49.12	57.62	66.12	74.62
600	9.65	18.15	22.40	26.65	30.90	35.15	39.40	43.65	47.90	52.15	60.65	69.15	77.65
700	12.68	21.18	25.42	29.67	33.92	38.17	42.42	46.67	50.92	55.17	63.67	72.17	80.67
800	15.70	24.20	28.45	32.70	36.95	41.20	45.45	49.70	53.95	58.20	66.70	75.20	83.70
900	18.72	27.22	31.47	35.72	39.97	44.22	48.47	52.72	56.97	61.22	69.72	78.22	86.72
1000	21.75	30.25	34.50	38.75	43.00	47.25	51.50	55.75	60.00	64.25	72.75	81.25	89.75
1100	24.77	33.27	37.52	41.77	46.02	50.27	54.52	58.77	63.02	67.27	75.77	84.27	92.77
1200	27.80	36.30	40.55	44.80	49.05	53.30	57.55	61.80	66.05	70.30	78.80	87.30	95.80
1300	30.82	39.32	43.57	47.82	52.07	56.32	60.57	64.82	69.07	73.32	81.82	90.32	98.82
1400	33.85	42.35	46.60	50.85	55.10	59.35	63.60	67.85	72.10	76.35	84.85	93.35	101.85
1500	36.87	45.38	49.62	53.87	58.12	62.37	66.62	70.87	75.12	79.37	87.87	96.37	104.87
1600	39.90	48.40	52.65	56.90	61.15	65.40	69.65	73.90	78.15	82.40	90.90	99.40	107.90
1700	42.93	51.43	55.67	59.92	64.17	68.42	72.67	76.92	81.17	85.42	93.92	102.42	110.92
1800	45.95	54.45	58.70	62.95	67.20	71.45	75.70	79.95	84.20	88.45	96.95	105.45	113.95
1900	48.98	57.48	61.72	65.97	70.22	74.47	78.72	82.97	87.22	91.47	99.97	108.47	116.97
2000	52.00	60.50	64.75	69.00	73.25	77.50	81.75	86.00	90.25	94.50	103.00	111.50	120.00
2100	55.03	63.53	67.77	72.02	76.27	80.52	84.77	89.02	93.27	97.52	106.02	114.52	123.02
2200	58.05	66.55	70.80	75.05	79.30	83.55	87.80	92.05	96.30	100.55	109.05	117.55	126.05
2300	61.08	69.58	73.82	78.07	82.32	86.57	90.82	95.07	99.32	103.57	112.07	120.57	129.07
2400	64.10	72.60	76.85	81.10	85.35	89.60	93.85	98.10	102.35	106.60	115.10	123.60	132.10
2500	67.13	75.63	79.87	84.12	88.37	92.62	96.87	101.12	105.37	109.62	118.12	126.62	135.12

TABLE 21. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$6.00 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.090 PER 0.1% PER CWT.)

PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)												
	-10	0	5	10	15	20	25	30	35	40	50	60	70
	DOLLAR DEVIATION FROM BREED AVERAGE												
-400	-20.40	-11.40	-6.90	-2.40	2.10	6.60	11.10	15.60	20.10	24.60	33.60	42.60	51.60
-300	-17.55	-8.55	-4.05	0.45	4.95	9.45	13.95	18.45	22.95	27.45	36.45	45.45	54.45
-200	-14.70	-5.70	-1.20	3.30	7.80	12.30	16.80	21.30	25.80	30.30	39.30	48.30	57.30
-100	-11.85	-2.85	1.65	6.15	10.65	15.15	19.65	24.15	28.65	33.15	42.15	51.15	60.15
0	-9.00	0.0	4.50	9.00	13.50	18.00	22.50	27.00	31.50	36.00	45.00	54.00	63.00
100	-6.15	2.85	7.35	11.85	16.35	20.85	25.35	29.85	34.35	38.85	47.85	56.85	65.85
200	-3.30	5.70	10.20	14.70	19.20	23.70	28.20	32.70	37.20	41.70	50.70	59.70	68.70
300	-0.45	8.55	13.05	17.55	22.05	26.55	31.05	35.55	40.05	44.55	53.55	62.55	71.55
400	2.40	11.40	15.90	20.40	24.90	29.40	33.90	38.40	42.90	47.40	56.40	65.40	74.40
500	5.25	14.25	18.75	23.25	27.75	32.25	36.75	41.25	45.75	50.25	59.25	68.25	77.25
600	8.10	17.10	21.60	26.10	30.60	35.10	39.60	44.10	48.60	53.10	62.10	71.10	80.10
700	10.95	19.95	24.45	28.95	33.45	37.95	42.45	46.95	51.45	55.95	64.95	73.95	82.95
800	13.80	22.80	27.30	31.80	36.30	40.80	45.30	49.80	54.30	58.80	67.80	76.80	85.80
900	16.65	25.65	30.15	34.65	39.15	43.65	48.15	52.65	57.15	61.65	70.65	79.65	88.65
1000	19.50	28.50	33.00	37.50	42.00	46.50	51.00	55.50	60.00	64.50	73.50	82.50	91.50
1100	22.35	31.35	35.85	40.35	44.85	49.35	53.85	58.35	62.85	67.35	76.35	85.35	94.35
1200	25.20	34.20	38.70	43.20	47.70	52.20	56.70	61.20	65.70	70.20	79.20	88.20	97.20
1300	28.05	37.05	41.55	46.05	50.55	55.05	59.55	64.05	68.55	73.05	82.05	91.05	100.05
1400	30.90	39.90	44.40	48.90	53.40	57.90	62.40	66.90	71.40	75.90	84.90	93.90	102.90
1500	33.75	42.75	47.25	51.75	56.25	60.75	65.25	69.75	74.25	78.75	87.75	96.75	105.75
1600	36.60	45.60	50.10	54.60	59.10	63.60	68.10	72.60	77.10	81.60	90.60	99.60	108.60
1700	39.45	48.45	52.95	57.45	61.95	66.45	70.95	75.45	79.95	84.45	93.45	102.45	111.45
1800	42.30	51.30	55.80	60.30	64.80	69.30	73.80	78.30	82.80	87.30	96.30	105.30	114.30
1900	45.15	54.15	58.65	63.15	67.65	72.15	76.65	81.15	85.65	90.15	99.15	108.15	117.15
2000	48.00	57.00	61.50	66.00	70.50	75.00	79.50	84.00	88.50	93.00	102.00	111.00	120.00
2100	50.85	59.85	64.35	68.85	73.35	77.85	82.35	86.85	91.35	95.85	104.85	113.85	122.85
2200	53.70	62.70	67.20	71.70	76.20	80.70	85.20	89.70	94.20	98.70	107.70	116.70	125.70
2300	56.55	65.55	70.05	74.55	79.05	83.55	88.05	92.55	97.05	101.55	110.55	119.55	128.55
2400	59.40	68.40	72.90	77.40	81.90	86.40	90.90	95.40	99.90	104.40	113.40	122.40	131.40
2500	62.25	71.25	75.75	80.25	84.75	89.25	93.75	98.25	102.75	107.25	116.25	125.25	134.25



TABLE 22. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$6.50 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.070 PER 0.1% PER CWT.)

	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
PREO. DIFF. OR COW INDEX FOR MILK (LBS.)	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	OLLAR DEVIATION FROM BREED AVERAGE													
-400	-23.20	-16.20	-12.70	-9.20	-5.70	-2.20	1.30	4.80	8.30	11.80	18.80	25.80	32.80	
-300	-19.15	-12.15	-8.65	-5.15	-1.65	1.85	5.35	8.85	12.35	15.85	22.85	29.85	36.85	
-200	-15.10	-8.10	-4.60	-1.10	2.40	5.90	9.40	12.90	16.40	19.90	26.90	33.90	40.90	
-100	-11.05	-4.05	-0.55	2.95	6.45	9.95	13.45	16.95	20.45	23.95	30.95	37.95	44.95	
0	-7.00	0.0	3.50	7.00	10.50	14.00	17.50	21.00	24.50	28.00	35.00	42.00	49.00	
100	-2.95	4.05	7.55	11.05	14.55	18.05	21.55	25.05	28.55	32.05	39.05	46.05	53.05	
200	1.10	8.10	11.60	15.10	18.60	22.10	25.60	29.10	32.60	36.10	43.10	50.10	57.10	
300	5.15	12.15	15.65	19.15	22.65	26.15	29.65	33.15	36.65	40.15	47.15	54.15	61.15	
400	9.20	16.20	19.70	23.20	26.70	30.20	33.70	37.20	40.70	44.20	51.20	58.20	65.20	
500	13.25	20.25	23.75	27.25	30.75	34.25	37.75	41.25	44.75	48.25	55.25	62.25	69.25	
600	17.30	24.30	27.80	31.30	34.80	38.30	41.80	45.30	48.80	52.30	59.30	66.30	73.30	
700	21.35	28.35	31.85	35.35	38.85	42.35	45.85	49.35	52.85	56.35	63.35	70.35	77.35	
800	25.40	32.40	35.90	39.40	42.90	46.40	49.90	53.40	56.90	60.40	67.40	74.40	81.40	
900	29.45	36.45	39.95	43.45	46.95	50.45	53.95	57.45	60.95	64.45	71.45	78.45	85.45	
1000	33.50	40.50	44.00	47.50	51.00	54.50	58.00	61.50	65.00	68.50	75.50	82.50	89.50	
1100	37.55	44.55	48.05	51.55	55.05	58.55	62.05	65.55	69.05	72.55	79.55	86.55	93.55	
1200	41.60	48.60	52.10	55.60	59.10	62.60	66.10	69.60	73.10	76.60	83.60	90.60	97.60	
1300	45.65	52.65	56.15	59.65	63.15	66.65	70.15	73.65	77.15	80.65	87.65	94.65	101.65	
1400	49.70	56.70	60.20	63.70	67.20	70.70	74.20	77.70	81.20	84.70	91.70	98.70	105.70	
1500	53.75	60.75	64.25	67.75	71.25	74.75	78.25	81.75	85.25	88.75	95.75	102.75	109.75	
1600	57.80	64.80	68.30	71.80	75.30	78.80	82.30	85.80	89.30	92.80	99.80	106.80	113.80	
1700	61.85	68.85	72.35	75.85	79.35	82.85	86.35	89.85	93.35	96.85	103.85	110.85	117.85	
1800	65.90	72.90	76.40	79.90	83.40	86.90	90.40	93.90	97.40	100.90	107.90	114.90	121.90	
1900	69.95	76.95	80.45	83.95	87.45	90.95	94.45	97.95	101.45	104.95	111.95	118.95	125.95	
2000	74.00	81.00	84.50	88.00	91.50	95.00	98.50	102.00	105.50	109.00	116.00	123.00	130.00	
2100	78.05	85.05	88.55	92.05	95.55	99.05	102.55	106.05	109.55	113.05	120.05	127.05	134.05	
2200	82.10	89.10	92.60	96.10	99.60	103.10	106.60	110.10	113.60	117.10	124.10	131.10	138.10	
2300	86.15	93.15	96.65	100.15	103.65	107.15	110.65	114.15	117.65	121.15	128.15	135.15	142.15	
2400	90.20	97.20	100.70	104.20	107.70	111.20	114.70	118.20	121.70	125.20	132.20	139.20	146.20	
2500	94.25	101.25	104.75	108.25	111.75	115.25	118.75	122.25	125.75	129.25	136.25	143.25	150.25	

TABLE 23. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$6.50 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.075 PER 0.1% PER CWT.)

PREO. DIFF. OR COW INDEX FOR MILK (LBS.)	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	OLLAR DEVIATION FROM BREED AVERAGE													
-400	-23.00	-15.50	-11.75	-8.00	-4.25	-0.50	3.25	7.00	10.75	14.50	22.00	29.50	37.00	
-300	-19.12	-11.63	-7.88	-4.13	-0.38	3.37	7.12	10.87	14.62	18.37	25.87	33.37	40.87	
-200	-15.25	-7.75	-4.00	-0.25	3.50	7.25	11.00	14.75	18.50	22.25	29.75	37.25	44.75	
-100	-11.37	-3.88	-0.13	3.62	7.37	11.12	14.87	18.62	22.37	26.12	33.62	41.12	48.62	
0	-7.50	0.0	3.75	7.50	11.25	15.00	18.75	22.50	26.25	30.00	37.50	45.00	52.50	
100	-3.62	3.88	7.62	11.37	15.12	18.87	22.62	26.37	30.12	33.87	41.37	48.87	56.37	
200	0.25	7.75	11.50	15.25	19.00	22.75	26.50	30.25	34.00	37.75	45.25	52.75	60.25	
300	4.13	11.63	15.38	19.12	22.87	26.62	30.37	34.12	37.87	41.62	49.12	56.62	64.12	
400	8.00	15.50	19.25	23.00	26.75	30.50	34.25	38.00	41.75	45.50	53.00	60.50	68.00	
500	11.88	19.37	23.12	26.87	30.62	34.37	38.12	41.87	45.62	49.37	56.87	64.37	71.87	
600	15.75	23.25	27.00	30.75	34.50	38.25	42.00	45.75	49.50	53.25	60.75	68.25	75.75	
700	19.62	27.13	30.87	34.62	38.37	42.12	45.87	49.62	53.37	57.12	64.62	72.12	79.62	
800	23.50	31.00	34.75	38.50	42.25	46.00	49.75	53.50	57.25	61.00	68.50	76.00	83.50	
900	27.37	34.88	38.62	42.37	46.12	49.87	53.62	57.37	61.12	64.87	72.37	79.87	87.37	
1000	31.25	38.75	42.50	46.25	50.00	53.75	57.50	61.25	65.00	68.75	76.25	83.75	91.25	
1100	35.13	42.63	46.37	50.12	53.87	57.62	61.37	65.12	68.87	72.62	80.12	87.62	95.12	
1200	39.00	46.50	50.25	54.00	57.75	61.50	65.25	69.00	72.75	76.50	84.00	91.50	99.00	
1300	42.88	50.38	54.12	57.87	61.62	65.37	69.12	72.87	76.62	80.37	87.87	95.37	102.87	
1400	46.75	54.25	58.00	61.75	65.50	69.25	73.00	76.75	80.50	84.25	91.75	99.25	106.75	
1500	50.63	58.13	61.88	65.63	69.38	73.13	76.88	80.62	84.38	88.12	95.62	103.12	110.62	
1600	54.50	62.00	65.75	69.50	73.25	77.00	80.75	84.50	88.25	92.00	99.50	107.00	114.50	
1700	58.38	65.88	69.63	73.38	77.13	80.88	84.63	88.37	92.13	95.87	103.37	110.87	118.37	
1800	62.25	69.75	73.50	77.25	81.00	84.75	88.50	92.25	96.00	99.75	107.25	114.75	122.25	
1900	66.13	73.63	77.38	81.13	84.88	88.63	92.38	96.12	99.88	103.62	111.12	118.62	126.12	
2000	70.00	77.50	81.25	85.00	88.75	92.50	96.25	100.00	103.75	107.50	115.00	122.50	130.00	
2100	73.88	81.38	85.13	88.88	92.63	96.38	100.12	103.87	107.62	111.37	118.87	126.37	133.87	
2200	77.75	85.25	89.00	92.75	96.50	100.25	104.00	107.75	111.50	115.25	122.75	130.25	137.75	
2300	81.63	89.13	92.88	96.63	100.37	104.12	107.87	111.62	115.37	119.12	126.62	134.12	141.62	
2400	85.50	93.00	96.75	100.50	104.25	108.00	111.75	115.50	119.25	123.00	130.50	138.00	145.50	
2500	89.38	96.88	100.62	104.37	108.12	111.87	115.62	119.37	123.12	126.87	134.37	141.87	149.37	

TABLE 24. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$6.50 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.080 PER 0.1% PER CWT.)

	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	DOLLAR DEVIATION FROM BREED AVERAGE													
-400	-22.80	-14.80	-10.80	-6.80	-2.80	1.20	5.20	9.20	13.20	17.20	25.20	33.20	41.20	
-300	-19.10	-11.10	-7.10	-3.10	0.90	4.90	8.90	12.90	16.90	20.90	28.90	36.90	44.90	
-200	-15.40	-7.40	-3.40	0.60	4.60	8.60	12.60	16.60	20.60	24.60	32.60	40.60	48.60	
-100	-11.70	-3.70	0.30	4.30	8.30	12.30	16.30	20.30	24.30	28.30	36.30	44.30	52.30	
0	-8.00	0.00	4.00	8.00	12.00	16.00	20.00	24.00	28.00	32.00	40.00	48.00	56.00	
100	-4.30	3.70	7.70	11.70	15.70	19.70	23.70	27.70	31.70	35.70	43.70	51.70	59.70	
200	-0.60	7.40	11.40	15.40	19.40	23.40	27.40	31.40	35.40	39.40	47.40	55.40	63.40	
300	3.10	11.10	15.10	19.10	23.10	27.10	31.10	35.10	39.10	43.10	51.10	59.10	67.10	
400	6.80	14.80	18.80	22.80	26.80	30.80	34.80	38.80	42.80	46.80	54.80	62.80	70.80	
500	10.50	18.50	22.50	26.50	30.50	34.50	38.50	42.50	46.50	50.50	58.50	66.50	74.50	
600	14.20	22.20	26.20	30.20	34.20	38.20	42.20	46.20	50.20	54.20	62.20	70.20	78.20	
700	17.90	25.90	29.90	33.90	37.90	41.90	45.90	49.90	53.90	57.90	65.90	73.90	81.90	
800	21.60	29.60	33.60	37.60	41.60	45.60	49.60	53.60	57.60	61.60	69.60	77.60	85.60	
900	25.30	33.30	37.30	41.30	45.30	49.30	53.30	57.30	61.30	65.30	73.30	81.30	89.30	
1000	29.00	37.00	41.00	45.00	49.00	53.00	57.00	61.00	65.00	69.00	77.00	85.00	93.00	
1100	32.70	40.70	44.70	48.70	52.70	56.70	60.70	64.70	68.70	72.70	80.70	88.70	96.70	
1200	36.40	44.40	48.40	52.40	56.40	60.40	64.40	68.40	72.40	76.40	84.40	92.40	100.40	
1300	40.10	48.10	52.10	56.10	60.10	64.10	68.10	72.10	76.10	80.10	88.10	96.10	104.10	
1400	43.80	51.80	55.80	59.80	63.80	67.80	71.80	75.80	79.80	83.80	91.80	99.80	107.80	
1500	47.50	55.50	59.50	63.50	67.50	71.50	75.50	79.50	83.50	87.50	95.50	103.50	111.50	
1600	51.20	59.20	63.20	67.20	71.20	75.20	79.20	83.20	87.20	91.20	99.20	107.20	115.20	
1700	54.90	62.90	66.90	70.90	74.90	78.90	82.90	86.90	90.90	94.90	102.90	110.90	118.90	
1800	58.60	66.60	70.60	74.60	78.60	82.60	86.60	90.60	94.60	98.60	106.60	114.60	122.60	
1900	62.30	70.30	74.30	78.30	82.30	86.30	90.30	94.30	98.30	102.30	110.30	118.30	126.30	
2000	66.00	74.00	78.00	82.00	86.00	90.00	94.00	98.00	102.00	106.00	114.00	122.00	130.00	
2100	69.70	77.70	81.70	85.70	89.70	93.70	97.70	101.70	105.70	109.70	117.70	125.70	133.70	
2200	73.40	81.40	85.40	89.40	93.40	97.40	101.40	105.40	109.40	113.40	121.40	129.40	137.40	
2300	77.10	85.10	89.10	93.10	97.10	101.10	105.10	109.10	113.10	117.10	125.10	133.10	141.10	
2400	80.80	88.80	92.80	96.80	100.80	104.80	108.80	112.80	116.80	120.80	128.80	136.80	144.80	
2500	84.50	92.50	96.50	100.50	104.50	108.50	112.50	116.50	120.50	124.50	132.50	140.50	148.50	

TABLE 25. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$6.50 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.085 PER 0.1% PER CWT.)

PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	DOLLAR DEVIATION FROM BREED AVERAGE													
-400	-22.60	-14.10	-9.85	-5.60	-1.35	2.90	7.15	11.40	15.65	19.90	28.40	36.90	45.40	
-300	-19.07	-10.58	-6.33	-2.08	2.17	6.42	10.67	14.92	19.17	23.42	31.92	40.42	48.92	
-200	-15.55	-7.05	-2.80	1.45	5.70	9.95	14.20	18.45	22.70	26.95	35.45	43.95	52.45	
-100	-12.02	-3.52	0.72	4.97	9.22	13.47	17.72	21.97	26.22	30.47	38.97	47.47	55.97	
0	-8.50	0.0	4.25	8.50	12.75	17.00	21.25	25.50	29.75	34.00	42.50	51.00	59.50	
100	-4.97	3.52	7.77	12.02	16.27	20.52	24.77	29.02	33.27	37.52	46.02	54.52	63.02	
200	-1.45	7.05	11.30	15.55	19.80	24.05	28.30	32.55	36.80	41.05	49.55	58.05	66.55	
300	2.08	10.58	14.82	19.07	23.32	27.57	31.82	36.07	40.32	44.57	53.07	61.57	70.07	
400	5.60	14.10	18.35	22.60	26.85	31.10	35.35	39.60	43.85	48.10	56.60	65.10	73.60	
500	9.13	17.62	21.87	26.12	30.37	34.62	38.87	43.12	47.37	51.62	60.12	68.62	77.12	
600	12.65	21.15	25.40	29.65	33.90	38.15	42.40	46.65	50.90	55.15	63.65	72.15	80.65	
700	16.18	24.68	28.92	33.17	37.42	41.67	45.92	50.17	54.42	58.67	67.17	75.67	84.17	
800	19.70	28.20	32.45	36.70	40.95	45.20	49.45	53.70	57.95	62.20	70.70	79.20	87.70	
900	23.22	31.72	35.97	40.22	44.47	48.72	52.97	57.22	61.47	65.72	74.22	82.72	91.22	
1000	26.75	35.25	39.50	43.75	48.00	52.25	56.50	60.75	65.00	69.25	77.75	86.25	94.75	
1100	30.27	38.77	43.02	47.27	51.52	55.77	60.02	64.27	68.52	72.77	81.27	89.77	98.27	
1200	33.80	42.30	46.55	50.80	55.05	59.30	63.55	67.80	72.05	76.30	84.80	93.30	101.80	
1300	37.32	45.82	50.07	54.32	58.57	62.82	67.07	71.32	75.57	79.82	88.32	96.82	105.32	
1400	40.85	49.35	53.60	57.85	62.10	66.35	70.60	74.85	79.10	83.35	91.85	100.35	108.85	
1500	44.38	52.87	57.12	61.37	65.62	69.87	74.12	78.37	82.62	86.87	95.37	103.87	112.37	
1600	47.90	56.40	60.65	64.90	69.15	73.40	77.65	81.90	86.15	90.40	98.90	107.40	115.90	
1700	51.43	59.93	64.17	68.42	72.67	76.92	81.17	85.42	89.67	93.92	102.42	110.92	119.42	
1800	54.95	63.45	67.70	71.95	76.20	80.45	84.70	88.95	93.20	97.45	105.95	114.45	122.95	
1900	58.48	66.98	71.22	75.47	79.72	83.97	88.22	92.47	96.72	100.97	109.47	117.97	126.47	
2000	62.00	70.50	74.75	79.00	83.25	87.50	91.75	96.00	100.25	104.50	113.00	121.50	130.00	
2100	65.53	74.03	78.27	82.52	86.77	91.02	95.27	99.52	103.77	108.02	116.52	125.02	133.52	
2200	69.05	77.55	81.80	86.05	90.30	94.55	98.80	103.05	107.30	111.55	120.05	128.55	137.05	
2300	72.57	81.07	85.32	89.57	93.82	98.07	102.32	106.57	110.82	115.07	123.57	132.07	140.57	
2400	76.10	84.60	88.85	93.10	97.35	101.60	105.85	110.10	114.35	118.60	127.10	135.60	144.10	
2500	79.63	88.13	92.37	96.62	100.87	105.12	109.37	113.62	117.87	122.12	130.62	139.12	147.62	

TABLE 26. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$6.50 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.090 PER 0.1% PER CWT.)

	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
PRED.OIFF. OR COW INDEX FOR MILK (LBS.)	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	OCCULAR DEVIATION FROM BREED AVERAGE													
-400	-22.40	-13.40	-8.90	-4.40	0.10	4.60	9.10	13.60	18.10	22.60	31.60	40.60	49.60	
-300	-19.05	-10.05	-5.55	-1.05	3.45	7.95	12.45	16.95	21.45	25.95	34.95	43.95	52.95	
-200	-15.70	-6.70	-2.20	2.30	6.80	11.30	15.80	20.30	24.80	29.30	38.30	47.30	56.30	
-100	-12.35	-3.35	1.15	5.65	10.15	14.65	19.15	23.65	28.15	32.65	41.65	50.65	59.65	
0	-9.00	0.0	4.50	9.00	13.50	18.00	22.50	27.00	31.50	36.00	45.00	54.00	63.00	
100	-5.65	3.35	7.85	12.35	16.85	21.35	25.85	30.35	34.85	39.35	48.35	57.35	66.35	
200	-2.30	6.70	11.20	15.70	20.20	24.70	29.20	33.70	38.20	42.70	51.70	60.70	69.70	
300	1.05	10.05	14.55	19.05	23.55	28.05	32.55	37.05	41.55	46.05	55.05	64.05	73.05	
400	4.40	13.40	17.90	22.40	26.90	31.40	35.90	40.40	44.90	49.40	58.40	67.40	76.40	
500	7.75	16.75	21.25	25.75	30.25	34.75	39.25	43.75	48.25	52.75	61.75	70.75	79.75	
600	11.10	20.10	24.60	29.10	33.60	38.10	42.60	47.10	51.60	56.10	65.10	74.10	83.10	
700	14.45	23.45	27.95	32.45	36.95	41.45	45.95	50.45	54.95	59.45	68.45	77.45	86.45	
800	17.80	26.80	31.30	35.80	40.30	44.80	49.30	53.80	58.30	62.80	71.80	80.80	89.80	
900	21.15	30.15	34.65	39.15	43.65	48.15	52.65	57.15	61.65	66.15	75.15	84.15	93.15	
1000	24.50	33.50	38.00	42.50	47.00	51.50	56.00	60.50	65.00	69.50	78.50	87.50	96.50	
1100	27.85	36.85	41.35	45.85	50.35	54.85	59.35	63.85	68.35	72.85	81.85	90.85	99.85	
1200	31.20	40.20	44.70	49.20	53.70	58.20	62.70	67.20	71.70	76.20	85.20	94.20	103.20	
1300	34.55	43.55	48.05	52.55	57.05	61.55	66.05	70.55	75.05	79.55	88.55	97.55	106.55	
1400	37.90	46.90	51.40	55.90	60.40	64.90	69.40	73.90	78.40	82.90	91.90	100.90	109.90	
1500	41.25	50.25	54.75	59.25	63.75	68.25	72.75	77.25	81.75	86.25	95.25	104.25	113.25	
1600	44.60	53.60	58.10	62.60	67.10	71.60	76.10	80.60	85.10	89.60	98.60	107.60	116.60	
1700	47.95	56.95	61.45	65.95	70.45	74.95	79.45	83.95	88.45	92.95	101.95	110.95	119.95	
1800	51.30	60.30	64.80	69.30	73.80	78.30	82.80	87.30	91.80	96.30	105.30	114.30	123.30	
1900	54.65	63.65	68.15	72.65	77.15	81.65	86.15	90.65	95.15	99.65	108.65	117.65	126.65	
2000	58.00	67.00	71.50	76.00	80.50	85.00	89.50	94.00	98.50	103.00	112.00	121.00	130.00	
2100	61.35	70.35	74.85	79.35	83.85	88.35	92.85	97.35	101.85	106.35	115.35	124.35	133.35	
2200	64.70	73.70	78.20	82.70	87.20	91.70	96.20	100.70	105.20	109.70	118.70	127.70	136.70	
2300	68.05	77.05	81.55	86.05	90.55	95.05	99.55	104.05	108.55	113.05	122.05	131.05	140.05	
2400	71.40	80.40	84.90	89.40	93.90	98.40	102.90	107.40	111.90	116.40	125.40	134.40	143.40	
2500	74.75	83.75	88.25	92.75	97.25	101.75	106.25	110.75	115.25	119.75	128.75	137.75	146.75	

TABLE 27. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$7.00 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.070 PER 0.1% PER CWT.)

PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	OCCULAR DEVIATION FROM BREED AVERAGE													
-400	-25.20	-18.20	-14.70	-11.20	-7.70	-4.20	-0.70	2.80	6.30	9.80	16.80	23.80	30.80	
-300	-20.65	-13.65	-10.15	-6.65	-3.15	0.35	3.85	7.35	10.85	14.35	21.35	28.35	35.35	
-200	-16.10	-9.10	-5.60	-2.10	1.40	4.90	8.40	11.90	15.40	18.90	25.90	32.90	39.90	
-100	-11.55	-4.55	-1.05	2.45	5.95	9.45	12.95	16.45	19.95	23.45	30.45	37.45	44.45	
0	-7.00	0.0	3.50	7.00	10.50	14.00	17.50	21.00	24.50	28.00	35.00	42.00	49.00	
100	-2.45	4.55	8.05	11.55	15.05	18.55	22.05	25.55	29.05	32.55	39.55	46.55	53.55	
200	2.10	9.10	12.60	16.10	19.60	23.10	26.60	30.10	33.60	37.10	44.10	51.10	58.10	
300	6.65	13.65	17.15	20.65	24.15	27.65	31.15	34.65	38.15	41.65	48.65	55.65	62.65	
400	11.20	18.20	21.70	25.20	28.70	32.20	35.70	39.20	42.70	46.20	53.20	60.20	67.20	
500	15.75	22.75	26.25	29.75	33.25	36.75	40.25	43.75	47.25	50.75	57.75	64.75	71.75	
600	20.30	27.30	30.80	34.30	37.80	41.30	44.80	48.30	51.80	55.30	62.30	69.30	76.30	
700	24.85	31.85	35.35	38.85	42.35	45.85	49.35	52.85	56.35	59.85	66.85	73.85	80.85	
800	29.40	36.40	39.90	43.40	46.90	50.40	53.90	57.40	60.90	64.40	71.40	78.40	85.40	
900	33.95	40.95	44.45	47.95	51.45	54.95	58.45	61.95	65.45	68.95	75.95	82.95	89.95	
1000	38.50	45.50	49.00	52.50	56.00	59.50	63.00	66.50	70.00	73.50	80.50	87.50	94.50	
1100	43.05	50.05	53.55	57.05	60.55	64.05	67.55	71.05	74.55	78.05	85.05	92.05	99.05	
1200	47.60	54.60	58.10	61.60	65.10	68.60	72.10	75.60	79.10	82.60	89.60	96.60	103.60	
1300	52.15	59.15	62.65	66.15	69.65	73.15	76.65	80.15	83.65	87.15	94.15	101.15	108.15	
1400	56.70	63.70	67.20	70.70	74.20	77.70	81.20	84.70	88.20	91.70	98.70	105.70	112.70	
1500	61.25	68.25	71.75	75.25	78.75	82.25	85.75	89.25	92.75	96.25	103.25	110.25	117.25	
1600	65.80	72.80	76.30	79.80	83.30	86.80	90.30	93.80	97.30	100.80	107.80	114.80	121.80	
1700	70.35	77.35	80.85	84.35	87.85	91.35	94.85	98.35	101.85	105.35	112.35	119.35	126.35	
1800	74.90	81.90	85.40	88.90	92.40	95.90	99.40	102.90	106.40	109.90	116.90	123.90	130.90	
1900	79.45	86.45	89.95	93.45	96.95	100.45	103.95	107.45	110.95	114.45	121.45	128.45	135.45	
2000	84.00	91.00	94.50	98.00	101.50	105.00	108.50	112.00	115.50	119.00	126.00	133.00	140.00	
2100	88.55	95.55	99.05	102.55	106.05	109.55	113.05	116.55	120.05	123.55	130.55	137.55	144.55	
2200	93.10	100.10	103.60	107.10	110.60	114.10	117.60	121.10	124.60	128.10	135.10	142.10	149.10	
2300	97.65	104.65	108.15	111.65	115.15	118.65	122.15	125.65	129.15	132.65	139.65	146.65	153.65	
2400	102.20	109.20	112.70	116.20	119.70	123.20	126.70	130.20	133.70	137.20	144.20	151.20	158.20	
2500	106.75	113.75	117.25	120.75	124.25	127.75	131.25	134.75	138.25	141.75	148.75	155.75	162.75	



TABLE 28. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO  
PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$7.00 PER  
HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.075 PER 0.1% PER CWT.)

PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	DOLLAR DEVIATION FROM BREED AVERAGE													
-400	-25.00	-17.50	-13.75	-10.00	-6.25	-2.50	1.25	5.00	8.75	12.50	20.00	27.50	35.00	
-300	-20.62	-13.13	-9.38	-5.63	-1.88	1.87	5.62	9.37	13.12	16.87	24.37	31.87	39.37	
-200	-16.25	-8.75	-5.00	-1.25	2.50	6.25	10.00	13.75	17.50	21.25	28.75	36.25	43.75	
-100	-11.87	-4.37	-0.63	3.12	6.87	10.62	14.37	18.12	21.87	25.62	33.12	40.62	48.12	
0	-7.50	0.0	3.75	7.50	11.25	15.00	18.75	22.50	26.25	30.00	37.50	45.00	52.50	
100	-3.12	4.37	8.12	11.87	15.62	19.37	23.12	26.87	30.62	34.37	41.87	49.37	56.87	
200	1.25	8.75	12.50	16.25	20.00	23.75	27.50	31.25	35.00	38.75	46.25	53.75	61.25	
300	5.63	13.13	16.87	20.62	24.37	28.12	31.87	35.62	39.37	43.12	50.62	58.12	65.62	
400	10.00	17.50	21.25	25.00	28.75	32.50	36.25	40.00	43.75	47.50	55.00	62.50	70.00	
500	14.38	21.88	25.62	29.37	33.12	36.87	40.62	44.37	48.12	51.87	59.37	66.87	74.37	
600	18.75	26.25	30.00	33.75	37.50	41.25	45.00	48.75	52.50	56.25	63.75	71.25	78.75	
700	23.12	30.62	34.37	38.12	41.87	45.62	49.37	53.12	56.87	60.62	68.12	75.62	83.12	
800	27.50	35.00	38.75	42.50	46.25	50.00	53.75	57.50	61.25	65.00	72.50	80.00	87.50	
900	31.88	39.38	43.12	46.87	50.62	54.37	58.12	61.87	65.62	69.37	76.87	84.37	91.87	
1000	36.25	43.75	47.50	51.25	55.00	58.75	62.50	66.25	70.00	73.75	81.25	88.75	96.25	
1100	40.63	48.12	51.87	55.62	59.37	63.12	66.87	70.62	74.37	78.12	85.62	93.12	100.62	
1200	45.00	52.50	56.25	60.00	63.75	67.50	71.25	75.00	78.75	82.50	90.00	97.50	105.00	
1300	49.38	56.88	60.62	64.37	68.12	71.87	75.62	79.37	83.12	86.87	94.37	101.87	109.37	
1400	53.75	61.25	65.00	68.75	72.50	76.25	80.00	83.75	87.50	91.25	98.75	106.25	113.75	
1500	58.13	65.63	69.37	73.12	76.87	80.62	84.37	88.12	91.87	95.62	103.12	110.62	118.12	
1600	62.50	70.00	73.75	77.50	81.25	85.00	88.75	92.50	96.25	100.00	107.50	115.00	122.50	
1700	66.88	74.38	78.12	81.87	85.62	89.37	93.12	96.87	100.62	104.37	111.87	119.37	126.87	
1800	71.25	78.75	82.50	86.25	90.00	93.75	97.50	101.25	105.00	108.75	116.25	123.75	131.25	
1900	75.63	83.13	86.87	90.62	94.37	98.12	101.87	105.62	109.37	113.12	120.62	128.12	135.62	
2000	80.00	87.50	91.25	95.00	98.75	102.50	106.25	110.00	113.75	117.50	125.00	132.50	140.00	
2100	84.38	91.88	95.62	99.37	103.12	106.87	110.62	114.37	118.12	121.87	129.37	136.87	144.37	
2200	88.75	96.25	100.00	103.75	107.50	111.25	115.00	118.75	122.50	126.25	133.75	141.25	148.75	
2300	93.13	100.63	104.37	108.12	111.87	115.62	119.37	123.12	126.87	130.62	138.12	145.62	153.12	
2400	97.50	105.00	108.75	112.50	116.25	120.00	123.75	127.50	131.25	135.00	142.50	150.00	157.50	
2500	101.88	109.38	113.12	116.87	120.62	124.37	128.12	131.87	135.62	139.37	146.87	154.37	161.87	

TABLE 29. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO  
PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$7.00 PER  
HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.080 PER 0.1% PER CWT.)

PRED.OIFF. OR COW INDEX FOR MILK (LBS.)	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	CELLAR DEVIATION FROM BREED AVERAGE													
-400	-24.80	-16.80	-12.80	-8.80	-4.80	-0.80	3.20	7.20	11.20	15.20	23.20	31.20	39.20	
-300	-20.60	-12.60	-8.60	-4.60	-0.60	3.40	7.40	11.40	15.40	19.40	27.40	35.40	43.40	
-200	-16.40	-8.40	-4.40	-0.40	3.60	7.60	11.60	15.60	19.60	23.60	31.60	39.60	47.60	
-100	-12.20	-4.20	-0.20	3.80	7.80	11.80	15.80	19.80	23.80	27.80	35.80	43.80	51.80	
0	-8.00	0.0	4.00	8.00	12.00	16.00	20.00	24.00	28.00	32.00	40.00	48.00	56.00	
100	-3.80	4.20	8.20	12.20	16.20	20.20	24.20	28.20	32.20	36.20	44.20	52.20	60.20	
200	0.40	8.40	12.40	16.40	20.40	24.40	28.40	32.40	36.40	40.40	48.40	56.40	64.40	
300	4.60	12.60	16.60	20.60	24.60	28.60	32.60	36.60	40.60	44.60	52.60	60.60	68.60	
400	8.80	16.80	20.80	24.80	28.80	32.80	36.80	40.80	44.80	48.80	56.80	64.80	72.80	
500	13.00	21.00	25.00	29.00	33.00	37.00	41.00	45.00	49.00	53.00	61.00	69.00	77.00	
600	17.20	25.20	29.20	33.20	37.20	41.20	45.20	49.20	53.20	57.20	65.20	73.20	81.20	
700	21.40	29.40	33.40	37.40	41.40	45.40	49.40	53.40	57.40	61.40	69.40	77.40	85.40	
800	25.60	33.60	37.60	41.60	45.60	49.60	53.60	57.60	61.60	65.60	73.60	81.60	89.60	
900	29.80	37.80	41.80	45.80	49.80	53.80	57.80	61.80	65.80	69.80	77.80	85.80	93.80	
1000	34.00	42.00	46.00	50.00	54.00	58.00	62.00	66.00	70.00	74.00	82.00	90.00	98.00	
1100	38.20	46.20	50.20	54.20	58.20	62.20	66.20	70.20	74.20	78.20	86.20	94.20	102.20	
1200	42.40	50.40	54.40	58.40	62.40	66.40	70.40	74.40	78.40	82.40	90.40	98.40	106.40	
1300	46.60	54.60	58.60	62.60	66.60	70.60	74.60	78.60	82.60	86.60	94.60	102.60	110.60	
1400	50.80	58.80	62.80	66.80	70.80	74.80	78.80	82.80	86.80	90.80	98.80	106.80	114.80	
1500	55.00	63.00	67.00	71.00	75.00	79.00	83.00	87.00	91.00	95.00	103.00	111.00	119.00	
1600	59.20	67.20	71.20	75.20	79.20	83.20	87.20	91.20	95.20	99.20	107.20	115.20	123.20	
1700	63.40	71.40	75.40	79.40	83.40	87.40	91.40	95.40	99.40	103.40	111.40	119.40	127.40	
1800	67.60	75.60	79.60	83.60	87.60	91.60	95.60	99.60	103.60	107.60	115.60	123.60	131.60	
1900	71.80	79.80	83.80	87.80	91.80	95.80	99.80	103.80	107.80	111.80	119.80	127.80	135.80	
2000	76.00	84.00	88.00	92.00	96.00	100.00	104.00	108.00	112.00	116.00	124.00	132.00	140.00	
2100	80.20	88.20	92.20	96.20	100.20	104.20	108.20	112.20	116.20	120.20	128.20	136.20	144.20	
2200	84.40	92.40	96.40	100.40	104.40	108.40	112.40	116.40	120.40	124.40	132.40	140.40	148.40	
2300	88.60	96.60	100.60	104.60	108.60	112.60	116.60	120.60	124.60	128.60	136.60	144.60	152.60	
2400	92.80	100.80	104.80	108.80	112.80	116.80	120.80	124.80	128.80	132.80	140.80	148.80	156.80	
2500	97.00	105.00	109.00	113.00	117.00	121.00	125.00	129.00	133.00	137.00	145.00	153.00	161.00	

TABLE 30. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$7.00 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.085 PER 0.1% PER CWT.)

PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	DOLLAR DEVIATION FROM BREED AVERAGE													
-400	-24.60	-16.10	-11.85	-7.60	-3.35	0.90	5.15	9.40	13.65	17.90	26.40	34.90	43.40	
-300	-20.57	-12.07	-7.83	-3.58	0.67	4.92	9.17	13.42	17.67	21.92	30.42	38.92	47.42	
-200	-16.55	-8.05	-3.80	0.45	4.70	8.95	13.20	17.45	21.70	25.95	34.45	42.95	51.45	
-100	-12.52	-4.02	0.22	4.47	8.72	12.97	17.22	21.47	25.72	29.97	38.47	46.97	55.47	
0	-8.50	0.0	4.25	8.50	12.75	17.00	21.25	25.50	29.75	34.00	42.50	51.00	59.50	
100	-4.47	4.02	8.27	12.52	16.77	21.02	25.27	29.52	33.77	38.02	46.52	55.02	63.52	
200	-0.45	8.05	12.30	16.55	20.80	25.05	29.30	33.55	37.80	42.05	50.55	59.05	67.55	
300	3.58	12.07	16.32	20.57	24.82	29.07	33.32	37.57	41.82	46.07	54.57	63.07	71.57	
400	7.60	16.10	20.35	24.60	28.85	33.10	37.35	41.60	45.85	50.10	58.60	67.10	75.60	
500	11.62	20.12	24.37	28.62	32.87	37.12	41.37	45.62	49.87	54.12	62.62	71.12	79.62	
600	15.65	24.15	28.40	32.65	36.90	41.15	45.40	49.65	53.90	58.15	66.65	75.15	83.65	
700	19.67	28.17	32.42	36.67	40.92	45.17	49.42	53.67	57.92	62.17	70.67	79.17	87.67	
800	23.70	32.20	36.45	40.70	44.95	49.20	53.45	57.70	61.95	66.20	74.70	83.20	91.70	
900	27.72	36.22	40.47	44.72	48.97	53.22	57.47	61.72	65.97	70.22	78.72	87.22	95.72	
1000	31.75	40.25	44.50	48.75	53.00	57.25	61.50	65.75	70.00	74.25	82.75	91.25	99.75	
1100	35.77	44.27	48.52	52.77	57.02	61.27	65.52	69.77	74.02	78.27	86.77	95.27	103.77	
1200	39.80	48.30	52.55	56.80	61.05	65.30	69.55	73.80	78.05	82.30	90.80	99.30	107.80	
1300	43.82	52.32	56.57	60.82	65.07	69.32	73.57	77.82	82.07	86.32	94.82	103.32	111.82	
1400	47.85	56.35	60.60	64.85	69.10	73.35	77.60	81.85	86.10	90.35	98.85	107.35	115.85	
1500	51.87	60.37	64.62	68.87	73.12	77.37	81.62	85.87	90.12	94.37	102.87	111.37	119.87	
1600	55.90	64.40	68.65	72.90	77.15	81.40	85.65	89.90	94.15	98.40	106.90	115.40	123.90	
1700	59.92	68.42	72.67	76.92	81.17	85.42	89.67	93.92	98.17	102.42	110.92	119.42	127.92	
1800	63.95	72.45	76.70	80.95	85.20	89.45	93.70	97.95	102.20	106.45	114.95	123.45	131.95	
1900	67.97	76.47	80.72	84.97	89.22	93.47	97.72	101.97	106.22	110.47	118.97	127.47	135.97	
2000	72.00	80.50	84.75	89.00	93.25	97.50	101.75	106.00	110.25	114.50	123.00	131.50	140.00	
2100	76.02	84.52	88.77	93.02	97.27	101.52	105.77	110.02	114.27	118.52	127.02	135.52	144.02	
2200	80.05	88.55	92.80	97.05	101.30	105.55	109.80	114.05	118.30	122.55	131.05	139.55	148.05	
2300	84.07	92.57	96.82	101.07	105.32	109.57	113.82	118.07	122.32	126.57	135.07	143.57	152.07	
2400	88.10	96.60	100.85	105.10	109.35	113.60	117.85	122.10	126.35	130.60	139.10	147.60	156.10	
2500	92.12	100.62	104.87	109.12	113.37	117.62	121.87	126.12	130.37	134.62	143.12	151.62	160.12	

TABLE 31. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$7.00 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.090 PER 0.1% PER CWT.)

PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	DOLLAR DEVIATION FROM BREED AVERAGE													
-400	-24.40	-15.40	-10.90	-6.40	-1.90	2.60	7.10	11.60	16.10	20.60	29.60	38.60	47.60	
-300	-20.55	-11.55	-7.05	-2.55	1.95	6.45	10.95	15.45	19.95	24.45	33.45	42.45	51.45	
-200	-16.70	-7.70	-3.20	1.30	5.80	10.30	14.80	19.30	23.80	28.30	37.30	46.30	55.30	
-100	-12.85	-3.85	0.65	5.15	9.65	14.15	18.65	23.15	27.65	32.15	41.15	50.15	59.15	
0	-9.00	0.0	4.50	9.00	13.50	18.00	22.50	27.00	31.50	36.00	45.00	54.00	63.00	
100	-5.15	3.85	8.35	12.85	17.35	21.85	26.35	30.85	35.35	39.85	48.85	57.85	66.85	
200	-1.30	7.70	12.20	16.70	21.20	25.70	30.20	34.70	39.20	43.70	52.70	61.70	70.70	
300	2.55	11.55	16.05	20.55	25.05	29.55	34.05	38.55	43.05	47.55	56.55	65.55	74.55	
400	6.40	15.40	19.90	24.40	28.90	33.40	37.90	42.40	46.90	51.40	60.40	69.40	78.40	
500	10.25	19.25	23.75	28.25	32.75	37.25	41.75	46.25	50.75	55.25	64.25	73.25	82.25	
600	14.10	23.10	27.60	32.10	36.60	41.10	45.60	50.10	54.60	59.10	68.10	77.10	86.10	
700	17.95	26.95	31.45	35.95	40.45	44.95	49.45	53.95	58.45	62.95	71.95	80.95	89.95	
800	21.80	30.80	35.30	39.80	44.30	48.80	53.30	57.80	62.30	66.80	75.80	84.80	93.80	
900	25.65	34.65	39.15	43.65	48.15	52.65	57.15	61.65	66.15	70.65	79.65	88.65	97.65	
1000	29.50	38.50	43.00	47.50	52.00	56.50	61.00	65.50	70.00	74.50	83.50	92.50	101.50	
1100	33.35	42.35	46.85	51.35	55.85	60.35	64.85	69.35	73.85	78.35	87.35	96.35	105.35	
1200	37.20	46.20	50.70	55.20	59.70	64.20	68.70	73.20	77.70	82.20	91.20	100.20	109.20	
1300	41.05	50.05	54.55	59.05	63.55	68.05	72.55	77.05	81.55	86.05	95.05	104.05	113.05	
1400	44.90	53.90	58.40	62.90	67.40	71.90	76.40	80.90	85.40	89.90	98.90	107.90	116.90	
1500	48.75	57.75	62.25	66.75	71.25	75.75	80.25	84.75	89.25	93.75	102.75	111.75	120.75	
1600	52.60	61.60	66.10	70.60	75.10	79.60	84.10	88.60	93.10	97.60	106.60	115.60	124.60	
1700	56.45	65.45	69.95	74.45	78.95	83.45	87.95	92.45	96.95	101.45	110.45	119.45	128.45	
1800	60.30	69.30	73.80	78.30	82.80	87.30	91.80	96.30	100.80	105.30	114.30	123.30	132.30	
1900	64.15	73.15	77.65	82.15	86.65	91.15	95.65	100.15	104.65	109.15	118.15	127.15	136.15	
2000	68.00	77.00	81.50	86.00	90.50	95.00	99.50	104.00	108.50	113.00	122.00	131.00	140.00	
2100	71.85	80.85	85.35	89.85	94.35	98.85	103.35	107.85	112.35	116.85	125.85	134.85	143.85	
2200	75.70	84.70	89.20	93.70	98.20	102.70	107.20	111.70	116.20	120.70	129.70	138.70	147.70	
2300	79.55	88.55	93.05	97.55	102.05	106.55	111.05	115.55	120.05	124.55	133.55	142.55	151.55	
2400	83.40	92.40	96.90	101.40	105.90	110.40	114.90	119.40	123.90	128.40	137.40	146.40	155.40	
2500	87.25	96.25	100.75	105.25	109.75	114.25	118.75	123.25	127.75	132.25	141.25	150.25	159.25	



TABLE 32. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO  
PREDICTED DIFFERENCES OF COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$7.50 PER  
HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.07C PER 0.1% PER CWT.)

PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	DOLLAR DEVIATION FROM BREED AVERAGE													
-400	-27.20	-20.20	-16.70	-13.20	-9.70	-6.20	-2.70	0.80	4.30	7.80	14.80	21.80	28.80	
-300	-22.15	-15.15	-11.65	-8.15	-4.65	-1.15	2.35	5.85	9.35	12.85	19.85	26.85	33.85	
-200	-17.10	-10.10	-6.60	-3.10	0.40	3.90	7.40	10.90	14.40	17.90	24.90	31.90	38.90	
-100	-12.05	-5.05	-1.55	1.95	5.45	8.95	12.45	15.95	19.45	22.95	29.95	36.95	43.95	
0	-7.00	0.0	3.50	7.00	10.50	14.00	17.50	21.00	24.50	28.00	35.00	42.00	49.00	
100	-1.95	5.05	8.55	12.05	15.55	19.05	22.55	26.05	29.55	33.05	40.05	47.05	54.05	
200	3.10	10.10	13.60	17.10	20.60	24.10	27.60	31.10	34.60	38.10	45.10	52.10	59.10	
300	8.15	15.15	18.65	22.15	25.65	29.15	32.65	36.15	39.65	43.15	50.15	57.15	64.15	
400	13.20	20.20	23.70	27.20	30.70	34.20	37.70	41.20	44.70	48.20	55.20	62.20	69.20	
500	18.25	25.25	28.75	32.25	35.75	39.25	42.75	46.25	49.75	53.25	60.25	67.25	74.25	
600	23.30	30.30	33.80	37.30	40.80	44.30	47.80	51.30	54.80	58.30	65.30	72.30	79.30	
700	28.35	35.35	38.85	42.35	45.85	49.35	52.85	56.35	59.85	63.35	70.35	77.35	84.35	
800	33.40	40.40	43.90	47.40	50.90	54.40	57.90	61.40	64.90	68.40	75.40	82.40	89.40	
900	38.45	45.45	48.95	52.45	55.95	59.45	62.95	66.45	69.95	73.45	80.45	87.45	94.45	
1000	43.50	50.50	54.00	57.50	61.00	64.50	68.00	71.50	75.00	78.50	85.50	92.50	99.50	
1100	48.55	55.55	59.05	62.55	66.05	69.55	73.05	76.55	80.05	83.55	90.55	97.55	104.55	
1200	53.60	60.60	64.10	67.60	71.10	74.60	78.10	81.60	85.10	88.60	95.60	102.60	109.60	
1300	58.65	65.65	69.15	72.65	76.15	79.65	83.15	86.65	90.15	93.65	100.65	107.65	114.65	
1400	63.70	70.70	74.20	77.70	81.20	84.70	88.20	91.70	95.20	98.70	105.70	112.70	119.70	
1500	68.75	75.75	79.25	82.75	86.25	89.75	93.25	96.75	100.25	103.75	110.75	117.75	124.75	
1600	73.80	80.80	84.30	87.80	91.30	94.80	98.30	101.80	105.30	108.80	115.80	122.80	129.80	
1700	78.85	85.85	89.35	92.85	96.35	99.85	103.35	106.85	110.35	113.85	120.85	127.85	134.85	
1800	83.90	90.90	94.40	97.90	101.40	104.90	108.40	111.90	115.40	118.90	125.90	132.90	139.90	
1900	88.95	95.95	99.45	102.95	106.45	109.95	113.45	116.95	120.45	123.95	130.95	137.95	144.95	
2000	94.00	101.00	104.50	108.00	111.50	115.00	118.50	122.00	125.50	129.00	136.00	143.00	150.00	
2100	99.05	106.05	109.55	113.05	116.55	120.05	123.55	127.05	130.55	134.05	141.05	148.05	155.05	
2200	104.10	111.10	114.60	118.10	121.60	125.10	128.60	132.10	135.60	139.10	146.10	153.10	160.10	
2300	109.15	116.15	119.65	123.15	126.65	130.15	133.65	137.15	140.65	144.15	151.15	158.15	165.15	
2400	114.20	121.20	124.70	128.20	131.70	135.20	138.70	142.20	145.70	149.20	156.20	163.20	170.20	
2500	119.25	126.25	129.75	133.25	136.75	140.25	143.75	147.25	150.75	154.25	161.25	168.25	175.25	

TABLE 33. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO  
PREDICTED DIFFERENCES OF COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$7.50 PER  
HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.075 PER 0.1% PER CWT.)

	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	DOLLAR DEVIATION FROM BREED AVERAGE													
-400	-27.00	-19.50	-15.75	-12.00	-8.25	-4.50	-0.75	3.00	6.75	10.50	18.00	25.50	33.00	
-300	-22.12	-14.62	-10.88	-7.13	-3.38	0.37	4.12	7.87	11.62	15.37	22.87	30.37	37.87	
-200	-17.25	-9.75	-6.00	-2.25	1.50	5.25	9.00	12.75	16.50	20.25	27.75	35.25	42.75	
-100	-12.37	-4.87	-1.13	2.62	6.37	10.12	13.87	17.62	21.37	25.12	32.62	40.12	47.62	
0	-7.50	0.00	3.75	7.50	11.25	15.00	18.75	22.50	26.25	30.00	37.50	45.00	52.50	
100	-2.62	4.87	8.62	12.37	16.12	19.87	23.62	27.37	31.12	34.87	42.37	49.87	57.37	
200	2.25	9.75	13.50	17.25	21.00	24.75	28.50	32.25	36.00	39.75	47.25	54.75	62.25	
300	7.13	14.62	18.37	22.12	25.87	29.62	33.37	37.12	40.87	44.62	52.12	59.62	67.12	
400	12.00	19.50	23.25	27.00	30.75	34.50	38.25	42.00	45.75	49.50	57.00	64.50	72.00	
500	16.87	24.37	28.12	31.87	35.62	39.37	43.12	46.87	50.62	54.37	61.87	69.37	76.87	
600	21.75	29.25	33.00	36.75	40.50	44.25	48.00	51.75	55.50	59.25	66.75	74.25	81.75	
700	26.63	34.12	37.87	41.62	45.37	49.12	52.87	56.62	60.37	64.12	71.62	79.12	86.62	
800	31.50	39.00	42.75	46.50	50.25	54.00	57.75	61.50	65.25	69.00	76.50	84.00	91.50	
900	36.38	43.88	47.62	51.37	55.12	58.87	62.62	66.37	70.12	73.87	81.37	88.87	96.37	
1000	41.25	48.75	52.50	56.25	60.00	63.75	67.50	71.25	75.00	78.75	86.25	93.75	101.25	
1100	46.13	53.63	57.37	61.12	64.87	68.62	72.37	76.12	79.87	83.62	91.12	98.62	106.12	
1200	51.00	58.50	62.25	66.00	69.75	73.50	77.25	81.00	84.75	88.50	96.00	103.50	111.00	
1300	55.88	63.38	67.12	70.87	74.62	78.37	82.12	85.87	89.62	93.37	100.87	108.37	115.87	
1400	60.75	68.25	72.00	75.75	79.50	83.25	87.00	90.75	94.50	98.25	105.75	113.25	120.75	
1500	65.63	73.13	76.87	80.62	84.37	88.12	91.87	95.62	99.37	103.12	110.62	118.12	125.62	
1600	70.50	78.00	81.75	85.50	89.25	93.00	96.75	100.50	104.25	108.00	115.50	123.00	130.50	
1700	75.38	82.88	86.62	90.37	94.12	97.87	101.62	105.37	109.12	112.87	120.37	127.87	135.37	
1800	80.25	87.75	91.50	95.25	99.00	102.75	106.50	110.25	114.00	117.75	125.25	132.75	140.25	
1900	85.13	92.63	96.37	100.12	103.87	107.62	111.37	115.12	118.87	122.62	130.12	137.62	145.12	
2000	90.00	97.50	101.25	105.00	108.75	112.50	116.25	120.00	123.75	127.50	135.00	142.50	150.00	
2100	94.88	102.37	106.12	109.87	113.62	117.37	121.12	124.87	128.62	132.37	139.87	147.37	154.87	
2200	99.75	107.25	111.00	114.75	118.50	122.25	126.00	129.75	133.50	137.25	144.75	152.25	159.75	
2300	104.63	112.12	115.87	119.62	123.37	127.12	130.87	134.62	138.37	142.12	149.62	157.12	164.62	
2400	109.50	117.00	120.75	124.50	128.25	132.00	135.75	139.50	143.25	147.00	154.50	162.00	169.50	
2500	114.37	121.87	125.62	129.37	133.12	136.87	140.62	144.37	148.12	151.87	159.37	166.87	174.37	

TABLE 34. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$7.50 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.080 PER 0.1% PER CWT.)

PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	DOLLAR DEVIATION FROM BREED AVERAGE													
-400	-26.80	-18.80	-14.80	-10.80	-6.80	-2.80	1.20	5.20	9.20	13.20	21.20	29.20	37.20	
-300	-22.10	-14.10	-10.10	-6.10	-2.10	1.90	5.90	9.90	13.90	17.90	25.90	33.90	41.90	
-200	-17.40	-9.40	-5.40	-1.40	2.60	6.60	10.60	14.60	18.60	22.60	30.60	38.60	46.60	
-100	-12.70	-4.70	-0.70	3.20	7.30	11.30	15.30	19.30	23.30	27.30	35.30	43.30	51.30	
0	-8.00	0.0	4.00	8.00	12.00	16.00	20.00	24.00	28.00	32.00	40.00	48.00	56.00	
100	-3.30	4.70	8.70	12.70	16.70	20.70	24.70	28.70	32.70	36.70	44.70	52.70	60.70	
200	1.40	9.40	13.40	17.40	21.40	25.40	29.40	33.40	37.40	41.40	49.40	57.40	65.40	
300	6.10	14.10	18.10	22.10	26.10	30.10	34.10	38.10	42.10	46.10	54.10	62.10	70.10	
400	10.80	18.80	22.80	26.80	30.80	34.80	38.80	42.80	46.80	50.80	58.80	66.80	74.80	
500	15.50	23.50	27.50	31.50	35.50	39.50	43.50	47.50	51.50	55.50	63.50	71.50	79.50	
600	20.20	28.20	32.20	36.20	40.20	44.20	48.20	52.20	56.20	60.20	68.20	76.20	84.20	
700	24.90	32.90	36.90	40.90	44.90	48.90	52.90	56.90	60.90	64.90	72.90	80.90	88.90	
800	29.60	37.60	41.60	45.60	49.60	53.60	57.60	61.60	65.60	69.60	77.60	85.60	93.60	
900	34.30	42.30	46.30	50.30	54.30	58.30	62.30	66.30	70.30	74.30	82.30	90.30	98.30	
1000	39.00	47.00	51.00	55.00	59.00	63.00	67.00	71.00	75.00	79.00	87.00	95.00	103.00	
1100	43.70	51.70	55.70	59.70	63.70	67.70	71.70	75.70	79.70	83.70	91.70	99.70	107.70	
1200	48.40	56.40	60.40	64.40	68.40	72.40	76.40	80.40	84.40	88.40	96.40	104.40	112.40	
1300	53.10	61.10	65.10	69.10	73.10	77.10	81.10	85.10	89.10	93.10	101.10	109.10	117.10	
1400	57.80	65.80	69.80	73.80	77.80	81.80	85.80	89.80	93.80	97.80	105.80	113.80	121.80	
1500	62.50	70.50	74.50	78.50	82.50	86.50	90.50	94.50	98.50	102.50	110.50	118.50	126.50	
1600	67.20	75.20	79.20	83.20	87.20	91.20	95.20	99.20	103.20	107.20	115.20	123.20	131.20	
1700	71.90	79.90	83.90	87.90	91.90	95.90	99.90	103.90	107.90	111.90	119.90	127.90	135.90	
1800	76.60	84.60	88.60	92.60	96.60	100.60	104.60	108.60	112.60	116.60	124.60	132.60	140.60	
1900	81.30	89.30	93.30	97.30	101.30	105.30	109.30	113.30	117.30	121.30	129.30	137.30	145.30	
2000	86.00	94.00	98.00	102.00	106.00	110.00	114.00	118.00	122.00	126.00	134.00	142.00	150.00	
2100	90.70	98.70	102.70	106.70	110.70	114.70	118.70	122.70	126.70	130.70	138.70	146.70	154.70	
2200	95.40	103.40	107.40	111.40	115.40	119.40	123.40	127.40	131.40	135.40	143.40	151.40	159.40	
2300	100.10	108.10	112.10	116.10	120.10	124.10	128.10	132.10	136.10	140.10	148.10	156.10	164.10	
2400	104.80	112.80	116.80	120.80	124.80	128.80	132.80	136.80	140.80	144.80	152.80	160.80	168.80	
2500	109.50	117.50	121.50	125.50	129.50	133.50	137.50	141.50	145.50	149.50	157.50	165.50	173.50	

TABLE 35. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$7.50 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.085 PER 0.1% PER CWT.)

PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	DOLLAR DEVIATION FROM BREED AVERAGE													
-400	-26.60	-18.10	-13.85	-9.60	-5.35	-1.10	3.15	7.40	11.65	15.90	24.40	32.90	41.40	
-300	-22.07	-13.57	-9.32	-5.08	-0.83	3.42	7.67	11.92	16.17	20.42	28.92	37.42	45.92	
-200	-17.55	-9.05	-4.80	-0.55	3.70	7.95	12.20	16.45	20.70	24.95	33.45	41.95	50.45	
-100	-13.02	-4.52	-0.27	3.57	8.22	12.47	16.72	20.97	25.22	29.47	37.97	46.47	54.97	
0	-8.50	0.0	4.25	8.50	12.75	17.00	21.25	25.50	29.75	34.00	42.50	51.00	59.50	
100	-3.97	4.52	8.77	13.02	17.27	21.52	25.77	30.02	34.27	38.52	47.02	55.52	64.02	
200	0.55	9.05	13.30	17.55	21.80	26.05	30.30	34.55	38.80	43.05	51.55	60.05	68.55	
300	5.08	13.57	17.82	22.07	26.32	30.57	34.82	39.07	43.32	47.57	56.07	64.57	73.07	
400	9.60	18.10	22.35	26.60	30.85	35.10	39.35	43.60	47.85	52.10	60.60	69.10	77.60	
500	14.12	22.62	26.87	31.12	35.37	39.62	43.87	48.12	52.37	56.62	65.12	73.62	82.12	
600	18.65	27.15	31.40	35.65	39.90	44.15	48.40	52.65	56.90	61.15	69.65	78.15	86.65	
700	23.17	31.67	35.92	40.17	44.42	48.67	52.92	57.17	61.42	65.67	74.17	82.67	91.17	
800	27.70	36.20	40.45	44.70	48.95	53.20	57.45	61.70	65.95	70.20	78.70	87.20	95.70	
900	32.22	40.72	44.97	49.22	53.47	57.72	61.97	66.22	70.47	74.72	83.22	91.72	100.22	
1000	36.75	45.25	49.50	53.75	58.00	62.25	66.50	70.75	75.00	79.25	87.75	96.25	104.75	
1100	41.27	49.77	54.02	58.27	62.52	66.77	71.02	75.27	79.52	83.77	92.27	100.77	109.27	
1200	45.80	54.30	58.55	62.80	67.05	71.30	75.55	79.80	84.05	88.30	96.80	105.30	113.80	
1300	50.32	58.82	63.07	67.32	71.57	75.82	80.07	84.32	88.57	92.82	101.32	109.82	118.32	
1400	54.85	63.35	67.60	71.85	76.10	80.35	84.60	88.85	93.10	97.35	105.85	114.35	122.85	
1500	59.37	67.87	72.12	76.37	80.62	84.87	89.12	93.37	97.62	101.87	110.37	118.87	127.37	
1600	63.90	72.40	76.65	80.90	85.15	89.40	93.65	97.90	102.15	106.40	114.90	123.40	131.90	
1700	68.42	76.92	81.17	85.42	89.67	93.92	98.17	102.42	106.67	110.92	119.42	127.92	136.42	
1800	72.95	81.45	85.70	89.95	94.20	98.45	102.70	106.95	111.20	115.45	123.95	132.45	140.95	
1900	77.47	85.97	90.22	94.47	98.72	102.97	107.22	111.47	115.72	119.97	128.47	136.97	145.47	
2000	82.00	90.50	94.75	99.00	103.25	107.50	111.75	116.00	120.25	124.50	133.00	141.50	150.00	
2100	86.52	95.02	99.27	103.52	107.77	112.02	116.27	120.52	124.77	129.02	137.52	146.02	154.52	
2200	91.05	99.55	103.80	108.05	112.30	116.55	120.80	125.05	129.30	133.55	142.05	150.55	159.05	
2300	95.57	104.07	108.32	112.57	116.82	121.07	125.32	129.57	133.82	138.07	146.57	155.07	163.57	
2400	100.10	108.60	112.85	117.10	121.35	125.60	129.85	134.10	138.35	142.60	151.10	159.60	168.10	
2500	104.62	113.12	117.37	121.62	125.87	130.12	134.37	138.62	142.87	147.12	155.62	164.12	172.62	

TABLE 36. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$7.50 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.090 PER 0.1% PER CWT.)

PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	DOLLAR DEVIATION FROM BREED AVERAGE													
-400	-26.40	-17.40	-12.90	-8.40	-3.90	0.60	5.10	9.60	14.10	18.60	27.60	36.60	45.60	
-300	-22.05	-13.05	-8.55	-4.05	0.45	4.95	9.45	13.95	18.45	22.95	31.95	40.95	49.95	
-200	-17.70	-8.70	-4.20	0.30	4.80	9.30	13.80	18.30	22.80	27.30	36.30	45.30	54.30	
-100	-13.35	-4.35	0.15	4.65	9.15	13.65	18.15	22.65	27.15	31.65	40.65	49.65	58.65	
0	-9.00	0.0	4.50	9.00	13.50	18.00	22.50	27.00	31.50	36.00	45.00	54.00	63.00	
100	-4.65	4.35	8.85	13.35	17.85	22.35	26.85	31.35	35.85	40.35	49.35	58.35	67.35	
200	-0.30	8.70	13.20	17.70	22.20	26.70	31.20	35.70	40.20	44.70	53.70	62.70	71.70	
300	4.05	13.05	17.55	22.05	26.55	31.05	35.55	40.05	44.55	49.05	58.05	67.05	76.05	
400	8.40	17.40	21.90	26.40	30.90	35.40	39.90	44.40	48.90	53.40	62.40	71.40	80.40	
500	12.75	21.75	26.25	30.75	35.25	39.75	44.25	48.75	53.25	57.75	66.75	75.75	84.75	
600	17.10	26.10	30.60	35.10	39.60	44.10	48.60	53.10	57.60	62.10	71.10	80.10	89.10	
700	21.45	30.45	34.95	39.45	43.95	48.45	52.95	57.45	61.95	66.45	75.45	84.45	93.45	
800	25.80	34.80	39.30	43.80	48.30	52.80	57.30	61.80	66.30	70.80	79.80	88.80	97.80	
900	30.15	39.15	43.65	48.15	52.65	57.15	61.65	66.15	70.65	75.15	84.15	93.15	102.15	
1000	34.50	43.50	48.00	52.50	57.00	61.50	66.00	70.50	75.00	79.50	88.50	97.50	106.50	
1100	38.85	47.85	52.35	56.85	61.35	65.85	70.35	74.85	79.35	83.85	92.85	101.85	110.85	
1200	43.20	52.20	56.70	61.20	65.70	70.20	74.70	79.20	83.70	88.20	97.20	106.20	115.20	
1300	47.55	56.55	61.05	65.55	70.05	74.55	79.05	83.55	88.05	92.55	101.55	110.55	119.55	
1400	51.90	60.90	65.40	69.90	74.40	78.90	83.40	87.90	92.40	96.90	105.90	114.90	123.90	
1500	56.25	65.25	69.75	74.25	78.75	83.25	87.75	92.25	96.75	101.25	110.25	119.25	128.25	
1600	60.60	69.60	74.10	78.60	83.10	87.60	92.10	96.60	101.10	105.60	114.60	123.60	132.60	
1700	64.95	73.95	78.45	82.95	87.45	91.95	96.45	100.95	105.45	109.95	118.95	127.95	136.95	
1800	69.30	78.30	82.80	87.30	91.80	96.30	100.80	105.30	109.80	114.30	123.30	132.30	141.30	
1900	73.65	82.65	87.15	91.65	96.15	100.65	105.15	109.65	114.15	118.65	127.65	136.65	145.65	
2000	78.00	87.00	91.50	96.00	100.50	105.00	109.50	114.00	118.50	123.00	132.00	141.00	150.00	
2100	82.35	91.35	95.85	100.35	104.85	109.35	113.85	118.35	122.85	127.35	136.35	145.35	154.35	
2200	86.70	95.70	100.20	104.70	109.20	113.70	118.20	122.70	127.20	131.70	140.70	149.70	158.70	
2300	91.05	100.05	104.55	109.05	113.55	118.05	122.55	127.05	131.55	136.05	145.05	154.05	163.05	
2400	95.40	104.40	108.90	113.40	117.90	122.40	126.90	131.40	135.90	140.40	149.40	158.40	167.40	
2500	99.75	108.75	113.25	117.75	122.25	126.75	131.25	135.75	140.25	144.75	153.75	162.75	171.75	

TABLE 37. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$8.00 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.070 PER 0.1% PER CWT.)

PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	DOLLAR DEVIATION FROM BREED AVERAGE													
-400	-29.20	-22.20	-18.70	-15.20	-11.70	-8.20	-4.70	-1.20	2.30	5.80	12.80	19.80	26.80	
-300	-23.65	-16.65	-13.15	-9.65	-6.15	-2.65	0.85	4.35	7.85	11.35	18.35	25.35	32.35	
-200	-18.10	-11.10	-7.60	-4.10	-0.60	2.90	6.40	9.90	13.40	16.90	23.90	30.90	37.90	
-100	-12.55	-5.55	-2.05	1.45	4.95	8.45	11.95	15.45	18.95	22.45	29.45	36.45	43.45	
0	-7.00	0.0	3.50	7.00	10.50	14.00	17.50	21.00	24.50	28.00	35.00	42.00	49.00	
100	-1.45	5.55	9.05	12.55	16.05	19.55	23.05	26.55	30.05	33.55	40.55	47.55	54.55	
200	4.10	11.10	14.60	18.10	21.60	25.10	28.60	32.10	35.60	39.10	46.10	53.10	60.10	
300	9.65	16.65	20.15	23.65	27.15	30.65	34.15	37.65	41.15	44.65	51.65	58.65	65.65	
400	15.20	22.20	25.70	29.20	32.70	36.20	39.70	43.20	46.70	50.20	57.20	64.20	71.20	
500	20.75	27.75	31.25	34.75	38.25	41.75	45.25	48.75	52.25	55.75	62.75	69.75	76.75	
600	26.30	33.30	36.80	40.30	43.80	47.30	50.80	54.30	57.80	61.30	68.30	75.30	82.30	
700	31.85	38.85	42.35	45.85	49.35	52.85	56.35	59.85	63.35	66.85	73.85	80.85	87.85	
800	37.40	44.40	47.90	51.40	54.90	58.40	61.90	65.40	68.90	72.40	79.40	86.40	93.40	
900	42.95	49.95	53.45	56.95	60.45	63.95	67.45	70.95	74.45	77.95	84.95	91.95	98.95	
1000	48.50	55.50	59.00	62.50	66.00	69.50	73.00	76.50	80.00	83.50	90.50	97.50	104.50	
1100	54.05	61.05	64.55	68.05	71.55	75.05	78.55	82.05	85.55	89.05	96.05	103.05	110.05	
1200	59.60	66.60	70.10	73.60	77.10	80.60	84.10	87.60	91.10	94.60	101.60	108.60	115.60	
1300	65.15	72.15	75.65	79.15	82.65	86.15	89.65	93.15	96.65	100.15	107.15	114.15	121.15	
1400	70.70	77.70	81.20	84.70	88.20	91.70	95.20	98.70	102.20	105.70	112.70	119.70	126.70	
1500	76.25	83.25	86.75	90.25	93.75	97.25	100.75	104.25	107.75	111.25	118.25	125.25	132.25	
1600	81.80	88.80	92.30	95.80	99.30	102.80	106.30	109.80	113.30	116.80	123.80	130.80	137.80	
1700	87.35	94.35	97.85	101.35	104.85	108.35	111.85	115.35	118.85	122.35	129.35	136.35	143.35	
1800	92.90	99.90	103.40	106.90	110.40	113.90	117.40	120.90	124.40	127.90	134.90	141.90	148.90	
1900	98.45	105.45	108.95	112.45	115.95	119.45	122.95	126.45	129.95	133.45	140.45	147.45	154.45	
2000	104.00	111.00	114.50	118.00	121.50	125.00	128.50	132.00	135.50	139.00	146.00	153.00	160.00	
2100	109.55	116.55	120.05	123.55	127.05	130.55	134.05	137.55	141.05	144.55	151.55	158.55	165.55	
2200	115.10	122.10	125.60	129.10	132.60	136.10	139.60	143.10	146.60	150.10	157.10	164.10	171.10	
2300	120.65	127.65	131.15	134.65	138.15	141.65	145.15	148.65	152.15	155.65	162.65	169.65	176.65	
2400	126.20	133.20	136.70	140.20	143.70	147.20	150.70	154.20	157.70	161.20	168.20	175.20	182.20	
2500	131.75	138.75	142.25	145.75	149.25	152.75	156.25	159.75	163.25	166.75	173.75	180.75	187.75	



TABLE 33. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$8.00 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.075 PER 0.1% PER CWT.)

PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	DOLLAR DEVIATION FROM BREED AVERAGE													
-400	-29.00	-21.50	-17.75	-14.00	-10.25	-6.50	-2.75	1.00	4.75	8.50	16.00	23.50	31.00	
-300	-23.52	-16.12	-12.37	-8.62	-4.87	-1.12	2.62	6.37	10.12	13.87	21.37	28.87	36.37	
-200	-18.25	-10.75	-7.00	-3.25	0.50	4.25	8.00	11.75	15.50	19.25	26.75	34.25	41.75	
-100	-12.87	-5.37	-1.63	2.12	5.87	9.62	13.37	17.12	20.87	24.62	32.12	39.62	47.12	
0	-7.50	0.0	3.75	7.50	11.25	15.00	18.75	22.50	26.25	30.00	37.50	45.00	52.50	
100	-2.12	5.37	9.12	12.87	16.62	20.37	24.12	27.87	31.62	35.37	42.87	50.37	57.87	
200	3.25	10.75	14.50	18.25	22.00	25.75	29.50	33.25	37.00	40.75	48.25	55.75	63.25	
300	8.62	16.12	19.87	23.62	27.37	31.12	34.87	38.62	42.37	46.12	53.62	61.12	68.62	
400	14.00	21.50	25.25	29.00	32.75	36.50	40.25	44.00	47.75	51.50	59.00	66.50	74.00	
500	19.37	26.87	30.62	34.37	38.12	41.87	45.62	49.37	53.12	56.87	64.37	71.87	79.37	
600	24.75	32.25	36.00	39.75	43.50	47.25	51.00	54.75	58.50	62.25	69.75	77.25	84.75	
700	30.12	37.62	41.37	45.12	48.87	52.62	56.37	60.12	63.87	67.62	75.12	82.62	90.12	
800	35.50	43.00	46.75	50.50	54.25	58.00	61.75	65.50	69.25	73.00	80.50	88.00	95.50	
900	40.87	48.37	52.12	55.87	59.62	63.37	67.12	70.87	74.62	78.37	85.87	93.37	100.87	
1000	46.25	53.75	57.50	61.25	65.00	68.75	72.50	76.25	80.00	83.75	91.25	98.75	106.25	
1100	51.62	59.12	62.87	66.62	70.37	74.12	77.87	81.62	85.37	89.12	96.62	104.12	111.62	
1200	57.00	64.50	68.25	72.00	75.75	79.50	83.25	87.00	90.75	94.50	102.00	109.50	117.00	
1300	62.37	69.87	73.62	77.37	81.12	84.87	88.62	92.37	96.12	99.87	107.37	114.87	122.37	
1400	67.75	75.25	79.00	82.75	86.50	90.25	94.00	97.75	101.50	105.25	112.75	120.25	127.75	
1500	73.12	80.62	84.37	88.12	91.87	95.62	99.37	103.12	106.87	110.62	118.12	125.62	133.12	
1600	78.50	86.00	89.75	93.50	97.25	101.00	104.75	108.50	112.25	116.00	123.50	131.00	138.50	
1700	83.87	91.37	95.12	98.87	102.62	106.37	110.12	113.87	117.62	121.37	128.87	136.37	143.87	
1800	89.25	96.75	100.50	104.25	108.00	111.75	115.50	119.25	123.00	126.75	134.25	141.75	149.25	
1900	94.62	102.12	105.87	109.62	113.37	117.12	120.87	124.62	128.37	132.12	139.62	147.12	154.62	
2000	100.00	107.50	111.25	115.00	118.75	122.50	126.25	130.00	133.75	137.50	145.00	152.50	160.00	
2100	105.37	112.87	116.62	120.37	124.12	127.87	131.62	135.37	139.12	142.87	150.37	157.87	165.37	
2200	110.75	118.25	122.00	125.75	129.50	133.25	137.00	140.75	144.50	148.25	155.75	163.25	170.75	
2300	116.12	123.62	127.37	131.12	134.87	138.62	142.37	146.12	149.87	153.62	161.12	168.62	176.12	
2400	121.50	129.00	132.75	136.50	140.25	144.00	147.75	151.50	155.25	159.00	166.50	174.00	181.50	
2500	126.87	134.37	138.12	141.87	145.62	149.37	153.12	156.87	160.62	164.37	171.87	179.37	186.87	

TABLE 39. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$8.00 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.080 PER 0.1% PER CWT.)

	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	DOLLAR DEVIATION FROM BREED AVERAGE													
-400	-28.80	-20.80	-16.80	-12.80	-8.80	-4.80	-0.80	3.20	7.20	11.20	15.20	27.20	35.20	
-300	-23.50	-15.50	-11.60	-7.60	-3.60	0.40	4.40	8.40	12.40	16.40	24.40	32.40	40.40	
-200	-18.40	-10.40	-6.40	-2.40	1.60	5.60	9.60	13.60	17.60	21.60	29.60	37.60	45.60	
-100	-13.20	-5.20	-1.20	2.80	6.80	10.80	14.80	18.80	22.80	26.80	34.80	42.80	50.80	
0	-8.00	0.0	4.00	8.00	12.00	16.00	20.00	24.00	28.00	32.00	40.00	48.00	56.00	
100	-2.80	5.20	9.20	13.20	17.20	21.20	25.20	29.20	33.20	37.20	45.20	53.20	61.20	
200	2.40	10.40	14.40	18.40	22.40	26.40	30.40	34.40	38.40	42.40	50.40	58.40	66.40	
300	7.60	15.60	19.60	23.60	27.60	31.60	35.60	39.60	43.60	47.60	55.60	63.60	71.60	
400	12.80	20.80	24.80	28.80	32.80	36.80	40.80	44.80	48.80	52.80	60.80	68.80	76.80	
500	18.00	26.00	30.00	34.00	38.00	42.00	46.00	50.00	54.00	58.00	66.00	74.00	82.00	
600	23.20	31.20	35.20	39.20	43.20	47.20	51.20	55.20	59.20	63.20	71.20	79.20	87.20	
700	28.40	36.40	40.40	44.40	48.40	52.40	56.40	60.40	64.40	68.40	76.40	84.40	92.40	
800	33.60	41.60	45.60	49.60	53.60	57.60	61.60	65.60	69.60	73.60	81.60	89.60	97.60	
900	38.80	46.80	50.80	54.80	58.80	62.80	66.80	70.80	74.80	78.80	86.80	94.80	102.80	
1000	44.00	52.00	56.00	60.00	64.00	68.00	72.00	76.00	80.00	84.00	92.00	100.00	108.00	
1100	49.20	57.20	61.20	65.20	69.20	73.20	77.20	81.20	85.20	89.20	97.20	105.20	113.20	
1200	54.40	62.40	66.40	70.40	74.40	78.40	82.40	86.40	90.40	94.40	102.40	110.40	118.40	
1300	59.60	67.60	71.60	75.60	79.60	83.60	87.60	91.60	95.60	99.60	107.60	115.60	123.60	
1400	64.80	72.80	76.80	80.80	84.80	88.80	92.80	96.80	100.80	104.80	112.80	120.80	128.80	
1500	70.00	78.00	82.00	86.00	90.00	94.00	98.00	102.00	106.00	110.00	118.00	126.00	134.00	
1600	75.20	83.20	87.20	91.20	95.20	99.20	103.20	107.20	111.20	115.20	123.20	131.20	139.20	
1700	80.40	88.40	92.40	96.40	100.40	104.40	108.40	112.40	116.40	120.40	128.40	136.40	144.40	
1800	85.60	93.60	97.60	101.60	105.60	109.60	113.60	117.60	121.60	125.60	133.60	141.60	149.60	
1900	90.80	98.80	102.80	106.80	110.80	114.80	118.80	122.80	126.80	130.80	138.80	146.80	154.80	
2000	96.00	104.00	108.00	112.00	116.00	120.00	124.00	128.00	132.00	136.00	144.00	152.00	160.00	
2100	101.20	109.20	113.20	117.20	121.20	125.20	129.20	133.20	137.20	141.20	149.20	157.20	165.20	
2200	106.40	114.40	118.40	122.40	126.40	130.40	134.40	138.40	142.40	146.40	154.40	162.40	170.40	
2300	111.60	119.60	123.60	127.60	131.60	135.60	139.60	143.60	147.60	151.60	159.60	167.60	175.60	
2400	116.80	124.80	128.80	132.80	136.80	140.80	144.80	148.80	152.80	156.80	164.80	172.80	180.80	
2500	122.00	130.00	134.00	138.00	142.00	146.00	150.00	154.00	158.00	162.00	170.00	178.00	186.00	



TABLE 40. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$8.00 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.085 PER 0.1% PER CWT.)

PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	COLLAR DEVIATION FROM BREED AVERAGE													
-400	-28.60	-20.10	-15.85	-11.60	-7.35	-3.10	1.15	5.40	9.65	13.90	22.40	30.90	39.40	
-300	-23.57	-15.07	-10.82	-6.57	-2.33	1.92	6.17	10.42	14.67	18.92	27.42	35.92	44.42	
-200	-18.55	-10.05	-5.80	-1.55	2.70	6.95	11.20	15.45	19.70	23.95	32.45	40.95	49.45	
-100	-13.52	-5.02	-0.77	3.47	7.72	11.97	16.22	20.47	24.72	28.97	37.47	45.97	54.47	
0	-8.50	0.0	4.25	8.50	12.75	17.00	21.25	25.50	29.75	34.00	42.50	51.00	59.50	
100	-3.47	5.02	9.27	13.52	17.77	22.02	26.27	30.52	34.77	39.02	47.52	56.02	64.52	
200	1.55	10.05	14.30	18.55	22.80	27.05	31.30	35.55	39.80	44.05	52.55	61.05	69.55	
300	6.57	15.07	19.32	23.57	27.82	32.07	36.32	40.57	44.82	49.07	57.57	66.07	74.57	
400	11.60	20.10	24.35	28.60	32.85	37.10	41.35	45.60	49.85	54.10	62.60	71.10	79.60	
500	16.62	25.12	29.37	33.62	37.87	42.12	46.37	50.62	54.87	59.12	67.62	76.12	84.62	
600	21.65	30.15	34.40	38.65	42.90	47.15	51.40	55.65	59.90	64.15	72.65	81.15	89.65	
700	26.67	35.17	39.42	43.67	47.92	52.17	56.42	60.67	64.92	69.17	77.67	86.17	94.67	
800	31.70	40.20	44.45	48.70	52.95	57.20	61.45	65.70	69.95	74.20	82.70	91.20	99.70	
900	36.72	45.22	49.47	53.72	57.97	62.22	66.47	70.72	74.97	79.22	87.72	96.22	104.72	
1000	41.75	50.25	54.50	58.75	63.00	67.25	71.50	75.75	80.00	84.25	92.75	101.25	109.75	
1100	46.77	55.27	59.52	63.77	68.02	72.27	76.52	80.77	85.02	89.27	97.77	106.27	114.77	
1200	51.80	60.30	64.55	68.80	73.05	77.30	81.55	85.80	90.05	94.30	102.80	111.30	119.80	
1300	56.82	65.32	69.57	73.82	78.07	82.32	86.57	90.82	95.07	99.32	107.82	116.32	124.82	
1400	61.85	70.35	74.60	78.85	83.10	87.35	91.60	95.85	100.10	104.35	112.85	121.35	129.85	
1500	66.87	75.37	79.62	83.87	88.12	92.37	96.62	100.87	105.12	109.37	117.87	126.37	134.87	
1600	71.90	80.40	84.65	88.90	93.15	97.40	101.65	105.90	110.15	114.40	122.90	131.40	139.90	
1700	76.92	85.42	89.67	93.92	98.17	102.42	106.67	110.92	115.17	119.42	127.92	136.42	144.92	
1800	81.95	90.45	94.70	98.95	103.20	107.45	111.70	115.95	120.20	124.45	132.95	141.45	149.95	
1900	86.97	95.47	99.72	103.97	108.22	112.47	116.72	120.97	125.22	129.47	137.97	146.47	154.97	
2000	92.00	100.50	104.75	109.00	113.25	117.50	121.75	126.00	130.25	134.50	143.00	151.50	160.00	
2100	97.02	105.52	109.77	114.02	118.27	122.52	126.77	131.02	135.27	139.52	148.02	156.52	165.02	
2200	102.05	110.55	114.80	119.05	123.30	127.55	131.80	136.05	140.30	144.55	153.05	161.55	170.05	
2300	107.07	115.57	119.82	124.07	128.32	132.57	136.82	141.07	145.32	149.57	158.07	166.57	175.07	
2400	112.10	120.60	124.85	129.10	133.35	137.60	141.85	146.10	150.35	154.60	163.10	171.60	180.10	
2500	117.12	125.62	129.87	134.12	138.37	142.62	146.87	151.12	155.37	159.62	168.12	176.62	185.12	

TABLE 41. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$8.00 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.090 PER 0.1% PER CWT.)

PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)												
	-10	0	5	10	15	20	25	30	35	40	50	60	70
	COLLAR DEVIATION FROM BREED AVERAGE												
-400	-28.40	-19.40	-14.90	-10.40	-5.90	-1.40	3.10	7.60	12.10	16.60	25.60	34.60	43.60
-300	-23.55	-14.55	-10.05	-5.55	-1.05	3.45	7.95	12.45	16.95	21.45	30.45	39.45	48.45
-200	-18.70	-9.70	-5.20	-0.70	3.80	8.30	12.80	17.30	21.80	26.30	35.30	44.30	53.30
-100	-13.85	-4.85	-0.35	4.15	8.65	13.15	17.65	22.15	26.65	31.15	40.15	49.15	58.15
0	-9.00	0.0	4.50	9.00	13.50	18.00	22.50	27.00	31.50	36.00	45.00	54.00	63.00
100	-4.15	4.85	9.35	13.85	18.35	22.85	27.35	31.85	36.35	40.85	49.85	58.85	67.85
200	0.70	9.70	14.20	18.70	23.20	27.70	32.20	36.70	41.20	45.70	54.70	63.70	72.70
300	5.55	14.55	19.05	23.55	28.05	32.55	37.05	41.55	46.05	50.55	59.55	68.55	77.55
400	10.40	19.40	23.90	28.40	32.90	37.40	41.90	46.40	50.90	55.40	64.40	73.40	82.40
500	15.25	24.25	28.75	33.25	37.75	42.25	46.75	51.25	55.75	60.25	69.25	78.25	87.25
600	20.10	29.10	33.60	38.10	42.60	47.10	51.60	56.10	60.60	65.10	74.10	83.10	92.10
700	24.95	33.95	38.45	42.95	47.45	51.95	56.45	60.95	65.45	69.95	78.95	87.95	96.95
800	29.80	38.80	43.30	47.80	52.30	56.80	61.30	65.80	70.30	74.80	83.80	92.80	101.80
900	34.65	43.65	48.15	52.65	57.15	61.65	66.15	70.65	75.15	79.65	88.65	97.65	106.65
1000	39.50	48.50	53.00	57.50	62.00	66.50	71.00	75.50	80.00	84.50	93.50	102.50	111.50
1100	44.35	53.35	57.85	62.35	66.85	71.35	75.85	80.35	84.85	89.35	98.35	107.35	116.35
1200	49.20	58.20	62.70	67.20	71.70	76.20	80.70	85.20	89.70	94.20	103.20	112.20	121.20
1300	54.05	63.05	67.55	72.05	76.55	81.05	85.55	90.05	94.55	99.05	108.05	117.05	126.05
1400	58.90	67.90	72.40	76.90	81.40	85.90	90.40	94.90	99.40	103.90	112.90	121.90	130.90
1500	63.75	72.75	77.25	81.75	86.25	90.75	95.25	99.75	104.25	108.75	117.75	126.75	135.75
1600	68.60	77.60	82.10	86.60	91.10	95.60	100.10	104.60	109.10	113.60	122.60	131.60	140.60
1700	73.45	82.45	86.95	91.45	95.95	100.45	104.95	109.45	113.95	118.45	127.45	136.45	145.45
1800	78.30	87.30	91.80	96.30	100.80	105.30	109.80	114.30	118.80	123.30	132.30	141.30	150.30
1900	83.15	92.15	96.65	101.15	105.65	110.15	114.65	119.15	123.65	128.15	137.15	146.15	155.15
2000	88.00	97.00	101.50	106.00	110.50	115.00	119.50	124.00	128.50	133.00	142.00	151.00	160.00
2100	92.85	101.85	106.35	110.85	115.35	119.85	124.35	128.85	133.35	137.85	146.85	155.85	164.85
2200	97.70	106.70	111.20	115.70	120.20	124.70	129.20	133.70	138.20	142.70	151.70	160.70	169.70
2300	102.55	111.55	116.05	120.55	125.05	129.55	134.05	138.55	143.05	147.55	156.55	165.55	174.55
2400	107.40	116.40	120.90	125.40	129.90	134.40	138.90	143.40	147.90	152.40	161.40	170.40	179.40
2500	112.25	121.25	125.75	130.25	134.75	139.25	143.75	148.25	152.75	157.25	166.25	175.25	184.25

TABLE 42. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$8.50 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.070 PER 0.1% PER CWT.)

	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	DOLLAR DEVIATION FROM BREED AVERAGE													
-400	-31.20	-24.20	-20.70	-17.20	-13.70	-10.20	-6.70	-3.20	0.30	3.80	10.80	17.80	24.80	
-300	-25.15	-18.15	-14.65	-11.15	-7.65	-4.15	-0.65	2.85	6.35	9.85	16.85	23.85	30.85	
-200	-19.10	-12.10	-8.60	-5.10	-1.60	1.90	5.40	8.90	12.40	15.90	22.90	29.90	36.90	
-100	-13.05	-6.05	-2.55	0.95	4.45	7.95	11.45	14.95	18.45	21.95	28.95	35.95	42.95	
0	-7.00	0.0	3.50	7.00	10.50	14.00	17.50	21.00	24.50	28.00	35.00	42.00	49.00	
100	-0.95	6.05	9.55	13.05	16.55	20.05	23.55	27.05	30.55	34.05	41.05	48.05	55.05	
200	5.10	12.10	15.60	19.10	22.60	26.10	29.60	33.10	36.60	40.10	47.10	54.10	61.10	
300	11.15	18.15	21.65	25.15	28.65	32.15	35.65	39.15	42.65	46.15	53.15	60.15	67.15	
400	17.20	24.20	27.70	31.20	34.70	38.20	41.70	45.20	48.70	52.20	59.20	66.20	73.20	
500	23.25	30.25	33.75	37.25	40.75	44.25	47.75	51.25	54.75	58.25	65.25	72.25	79.25	
600	29.30	36.30	39.80	43.30	46.80	50.30	53.80	57.30	60.80	64.30	71.30	78.30	85.30	
700	35.35	42.35	45.85	49.35	52.85	56.35	59.85	63.35	66.85	70.35	77.35	84.35	91.35	
800	41.40	48.40	51.90	55.40	58.90	62.40	65.90	69.40	72.90	76.40	83.40	90.40	97.40	
900	47.45	54.45	57.95	61.45	64.95	68.45	71.95	75.45	78.95	82.45	89.45	96.45	103.45	
1000	53.50	60.50	64.00	67.50	71.00	74.50	78.00	81.50	85.00	88.50	95.50	102.50	109.50	
1100	59.55	66.55	70.05	73.55	77.05	80.55	84.05	87.55	91.05	94.55	101.55	108.55	115.55	
1200	65.60	72.60	76.10	79.60	83.10	86.60	90.10	93.60	97.10	100.60	107.60	114.60	121.60	
1300	71.65	78.65	82.15	85.65	89.15	92.65	96.15	99.65	103.15	106.65	113.65	120.65	127.65	
1400	77.70	84.70	88.20	91.70	95.20	98.70	102.20	105.70	109.20	112.70	119.70	126.70	133.70	
1500	83.75	90.75	94.25	97.75	101.25	104.75	108.25	111.75	115.25	118.75	125.75	132.75	139.75	
1600	89.80	96.80	100.30	103.80	107.30	110.80	114.30	117.80	121.30	124.80	131.80	138.80	145.80	
1700	95.85	102.85	106.35	109.85	113.35	116.85	120.35	123.85	127.35	130.85	137.85	144.85	151.85	
1800	101.90	108.90	112.40	115.90	119.40	122.90	126.40	129.90	133.40	136.90	143.90	150.90	157.90	
1900	107.95	114.95	118.45	121.95	125.45	128.95	132.45	135.95	139.45	142.95	149.95	156.95	163.95	
2000	114.00	121.00	124.50	128.00	131.50	135.00	138.50	142.00	145.50	149.00	156.00	163.00	170.00	
2100	120.05	127.05	130.55	134.05	137.55	141.05	144.55	148.05	151.55	155.05	162.05	169.05	176.05	
2200	126.10	133.10	136.60	140.10	143.60	147.10	150.60	154.10	157.60	161.10	168.10	175.10	182.10	
2300	132.15	139.15	142.65	146.15	149.65	153.15	156.65	160.15	163.65	167.15	174.15	181.15	188.15	
2400	138.20	145.20	148.70	152.20	155.70	159.20	162.70	166.20	169.70	173.20	180.20	187.20	194.20	
2500	144.25	151.25	154.75	158.25	161.75	165.25	168.75	172.25	175.75	179.25	186.25	193.25	200.25	

TABLE 43. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$8.50 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.075 PER 0.1% PER CWT.)

	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	DOLLAR DEVIATION FROM BREED AVERAGE													
-400	-31.00	-23.50	-16.75	-10.00	-12.25	-8.50	-4.75	-1.00	2.75	6.50	14.00	21.50	29.00	
-300	-25.12	-17.62	-13.87	-10.12	-6.37	-2.62	1.12	4.87	8.62	12.37	19.87	27.37	34.87	
-200	-19.25	-11.75	-8.00	-4.25	-0.50	3.25	7.00	10.75	14.50	18.25	25.75	33.25	40.75	
-100	-13.37	-5.87	-2.13	1.62	5.37	9.12	12.87	16.62	20.37	24.12	31.62	39.12	46.62	
0	-7.50	0.0	3.75	7.50	11.25	15.00	18.75	22.50	26.25	30.00	37.50	45.00	52.50	
100	-1.62	5.87	9.62	13.37	17.12	20.87	24.62	28.37	32.12	35.87	43.37	50.87	58.37	
200	4.25	11.75	15.50	19.25	23.00	26.75	30.50	34.25	38.00	41.75	49.25	56.75	64.25	
300	10.12	17.62	21.37	25.12	28.87	32.62	36.37	40.12	43.87	47.62	55.12	62.62	70.12	
400	16.00	23.50	27.25	31.00	34.75	38.50	42.25	46.00	49.75	53.50	61.00	68.50	76.00	
500	21.87	29.37	33.12	36.87	40.62	44.37	48.12	51.87	55.62	59.37	66.87	74.37	81.87	
600	27.75	35.25	39.00	42.75	46.50	50.25	54.00	57.75	61.50	65.25	72.75	80.25	87.75	
700	33.62	41.12	44.87	48.62	52.37	56.12	59.87	63.62	67.37	71.12	78.62	86.12	93.62	
800	39.50	47.00	50.75	54.50	58.25	62.00	65.75	69.50	73.25	77.00	84.50	92.00	99.50	
900	45.37	52.87	56.62	60.37	64.12	67.87	71.62	75.37	79.12	82.87	90.37	97.87	105.37	
1000	51.25	58.75	62.50	66.25	70.00	73.75	77.50	81.25	85.00	88.75	96.25	103.75	111.25	
1100	57.12	64.62	68.37	72.12	75.87	79.62	83.37	87.12	90.87	94.62	102.12	109.62	117.12	
1200	63.00	70.50	74.25	78.00	81.75	85.50	89.25	93.00	96.75	100.50	108.00	115.50	123.00	
1300	68.87	76.37	80.12	83.87	87.62	91.37	95.12	98.87	102.62	106.37	113.87	121.37	128.87	
1400	74.75	82.25	86.00	89.75	93.50	97.25	101.00	104.75	108.50	112.25	119.75	127.25	134.75	
1500	80.62	88.12	91.87	95.62	99.37	103.12	106.87	110.62	114.37	118.12	125.62	133.12	140.62	
1600	86.50	94.00	97.75	101.50	105.25	109.00	112.75	116.50	120.25	124.00	131.50	139.00	146.50	
1700	92.37	99.87	103.62	107.37	111.12	114.87	118.62	122.37	126.12	129.87	137.37	144.87	152.37	
1800	98.25	105.75	109.50	113.25	117.00	120.75	124.50	128.25	132.00	135.75	143.25	150.75	158.25	
1900	104.12	111.62	115.37	119.12	122.87	126.62	130.37	134.12	137.87	141.62	149.12	156.62	164.12	
2000	110.00	117.50	121.25	125.00	128.75	132.50	136.25	140.00	143.75	147.50	155.00	162.50	170.00	
2100	115.87	123.37	127.12	130.87	134.62	138.37	142.12	145.87	149.62	153.37	160.87	168.37	175.87	
2200	121.75	129.25	133.00	136.75	140.50	144.25	148.00	151.75	155.50	159.25	166.75	174.25	181.75	
2300	127.62	135.12	138.87	142.62	146.37	150.12	153.87	157.62	161.37	165.12	172.62	180.12	187.62	
2400	133.50	141.00	144.75	148.50	152.25	156.00	159.75	163.50	167.25	171.00	178.50	186.00	193.50	
2500	139.37	146.87	150.62	154.37	158.12	161.87	165.62	169.37	173.12	176.87	184.37	191.87	199.37	

TABLE 44. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$8.50 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.080 PER 0.1% PER CWT.)

PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	DOLLAR DEVIATION FROM BREED AVERAGE													
-400	-30.80	-22.80	-18.80	-14.80	-10.80	-6.80	-2.80	1.20	5.20	9.20	17.20	25.20	33.20	
-300	-25.10	-17.10	-13.10	-9.10	-5.10	-1.10	2.90	6.90	10.90	14.90	22.90	30.90	38.90	
-200	-19.40	-11.40	-7.40	-3.40	0.60	4.60	8.60	12.60	16.60	20.60	28.60	36.60	44.60	
-100	-13.70	-5.70	-1.70	2.30	6.30	10.30	14.30	18.30	22.30	26.30	34.30	42.30	50.30	
0	-8.00	0.0	4.00	8.00	12.00	16.00	20.00	24.00	28.00	32.00	40.00	48.00	56.00	
100	-2.30	5.70	9.70	13.70	17.70	21.70	25.70	29.70	33.70	37.70	45.70	53.70	61.70	
200	3.40	11.40	15.40	19.40	23.40	27.40	31.40	35.40	39.40	43.40	51.40	59.40	67.40	
300	9.10	17.10	21.10	25.10	29.10	33.10	37.10	41.10	45.10	49.10	57.10	65.10	73.10	
400	14.80	22.80	26.80	30.80	34.80	38.80	42.80	46.80	50.80	54.80	62.80	70.80	78.80	
500	20.50	28.50	32.50	36.50	40.50	44.50	48.50	52.50	56.50	60.50	68.50	76.50	84.50	
600	26.20	34.20	38.20	42.20	46.20	50.20	54.20	58.20	62.20	66.20	74.20	82.20	90.20	
700	31.90	39.90	43.90	47.90	51.90	55.90	59.90	63.90	67.90	71.90	79.90	87.90	95.90	
800	37.60	45.60	49.60	53.60	57.60	61.60	65.60	69.60	73.60	77.60	85.60	93.60	101.60	
900	43.30	51.30	55.30	59.30	63.30	67.30	71.30	75.30	79.30	83.30	91.30	99.30	107.30	
1000	49.00	57.00	61.00	65.00	69.00	73.00	77.00	81.00	85.00	89.00	97.00	105.00	113.00	
1100	54.70	62.70	66.70	70.70	74.70	78.70	82.70	86.70	90.70	94.70	102.70	110.70	118.70	
1200	60.40	68.40	72.40	76.40	80.40	84.40	88.40	92.40	96.40	100.40	108.40	116.40	124.40	
1300	66.10	74.10	78.10	82.10	86.10	90.10	94.10	98.10	102.10	106.10	114.10	122.10	130.10	
1400	71.80	79.80	83.80	87.80	91.80	95.80	99.80	103.80	107.80	111.80	119.80	127.80	135.80	
1500	77.50	85.50	89.50	93.50	97.50	101.50	105.50	109.50	113.50	117.50	125.50	133.50	141.50	
1600	83.20	91.20	95.20	99.20	103.20	107.20	111.20	115.20	119.20	123.20	131.20	139.20	147.20	
1700	88.90	96.90	100.90	104.90	108.90	112.90	116.90	120.90	124.90	128.90	136.90	144.90	152.90	
1800	94.60	102.60	106.60	110.60	114.60	118.60	122.60	126.60	130.60	134.60	142.60	150.60	158.60	
1900	100.30	108.30	112.30	116.30	120.30	124.30	128.30	132.30	136.30	140.30	148.30	156.30	164.30	
2000	106.00	114.00	118.00	122.00	126.00	130.00	134.00	138.00	142.00	146.00	154.00	162.00	170.00	
2100	111.70	119.70	123.70	127.70	131.70	135.70	139.70	143.70	147.70	151.70	159.70	167.70	175.70	
2200	117.40	125.40	129.40	133.40	137.40	141.40	145.40	149.40	153.40	157.40	165.40	173.40	181.40	
2300	123.10	131.10	135.10	139.10	143.10	147.10	151.10	155.10	159.10	163.10	171.10	179.10	187.10	
2400	128.80	136.80	140.80	144.80	148.80	152.80	156.80	160.80	164.80	168.80	176.80	184.80	192.80	
2500	134.50	142.50	146.50	150.50	154.50	158.50	162.50	166.50	170.50	174.50	182.50	190.50	198.50	

TABLE 45. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE DAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$8.50 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$0.085 PER 0.1% PER CWT.)

PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)													
	-10	0	5	10	15	20	25	30	35	40	50	60	70	
	COLLAR DEVIATION FROM BREED AVERAGE													
-400	-30.60	-22.10	-17.85	-13.60	-9.35	-5.10	-0.85	3.40	7.65	11.90	20.40	28.90	37.40	
-300	-25.07	-16.57	-12.32	-8.07	-3.82	0.43	4.68	8.93	13.18	17.43	25.93	34.43	42.93	
-200	-19.55	-11.05	-6.80	-2.55	1.70	5.95	10.20	14.45	18.70	22.95	31.45	39.95	48.45	
-100	-14.02	-5.52	-1.27	2.97	7.22	11.47	15.72	19.97	24.22	28.47	36.97	45.47	53.97	
0	-8.50	0.0	4.25	8.50	12.75	17.00	21.25	25.50	29.75	34.00	42.50	51.00	59.50	
100	-2.97	5.52	9.77	14.02	18.27	22.52	26.77	31.02	35.27	39.52	48.02	56.52	65.02	
200	2.55	11.05	15.30	19.55	23.80	28.05	32.30	36.55	40.80	45.05	53.55	62.05	70.55	
300	8.07	16.57	20.82	25.07	29.32	33.57	37.82	42.07	46.32	50.57	59.07	67.57	76.07	
400	13.60	22.10	26.35	30.60	34.85	39.10	43.35	47.60	51.85	56.10	64.60	73.10	81.60	
500	19.12	27.62	31.87	36.12	40.37	44.62	48.87	53.12	57.37	61.62	70.12	78.62	87.12	
600	24.65	33.15	37.40	41.65	45.90	50.15	54.40	58.65	62.90	67.15	75.65	84.15	92.65	
700	30.17	38.67	42.92	47.17	51.42	55.67	59.92	64.17	68.42	72.67	81.17	89.67	98.17	
800	35.70	44.20	48.45	52.70	56.95	61.20	65.45	69.70	73.95	78.20	86.70	95.20	103.70	
900	41.22	49.72	53.97	58.22	62.47	66.72	70.97	75.22	79.47	83.72	92.22	100.72	109.22	
1000	46.75	55.25	59.50	63.75	68.00	72.25	76.50	80.75	85.00	89.25	97.75	106.25	114.75	
1100	52.27	60.77	65.02	69.27	73.52	77.77	82.02	86.27	90.52	94.77	103.27	111.77	120.27	
1200	57.80	66.30	70.55	74.80	79.05	83.30	87.55	91.80	96.05	100.30	108.80	117.30	125.80	
1300	63.32	71.82	76.07	80.32	84.57	88.82	93.07	97.32	101.57	105.82	114.32	122.82	131.32	
1400	68.85	77.35	81.60	85.85	90.10	94.35	98.60	102.85	107.10	111.35	119.85	128.35	136.85	
1500	74.37	82.87	87.12	91.37	95.62	99.87	104.12	108.37	112.62	116.87	125.37	133.87	142.37	
1600	79.90	88.40	92.65	96.90	101.15	105.40	109.65	113.90	118.15	122.40	130.90	139.40	147.90	
1700	85.42	93.92	98.17	102.42	106.67	110.92	115.17	119.42	123.67	127.92	136.42	144.92	153.42	
1800	90.95	99.45	103.70	107.95	112.20	116.45	120.70	124.95	129.20	133.45	141.95	150.45	158.95	
1900	96.47	104.97	109.22	113.47	117.72	121.97	126.22	130.47	134.72	138.97	147.47	155.97	164.47	
2000	102.00	110.50	114.75	119.00	123.25	127.50	131.75	136.00	140.25	144.50	153.00	161.50	170.00	
2100	107.52	116.02	120.27	124.52	128.77	133.02	137.27	141.52	145.77	150.02	158.52	167.02	175.52	
2200	113.05	121.55	125.80	130.05	134.30	138.55	142.80	147.05	151.30	155.55	164.05	172.55	181.05	
2300	118.57	127.07	131.32	135.57	139.82	144.07	148.32	152.57	156.82	161.07	169.57	178.07	186.57	
2400	124.10	132.60	136.85	141.10	145.35	149.60	153.85	158.10	162.35	166.60	175.10	183.60	192.10	
2500	129.62	138.12	142.37	146.62	150.87	155.12	159.37	163.62	167.87	172.12	180.62	189.12	197.62	

TABLE 46. THE ADDITIONAL VALUE OF MILK EXPECTED OF THE CAUGHTERS OF BULLS OR COWS ACCORDING TO PREDICTED DIFFERENCES OR COW INDEXES FOR MILK AND FAT (BASED ON A PRICE OF \$8.50 PER HUNDRED POUNDS OF MILK HAVING 3.5% FAT AND A DIFFERENTIAL OF \$C.090 PER 0.1% PER CWT.)

PRED. DIFF. OR COW INDEX FOR MILK (LBS.)	PREDICTED DIFFERENCE OR COW INDEX FOR FAT (LBS.)												
	-10	0	5	10	15	20	25	30	35	40	50	60	70
	COLLAR DEVIATION FROM BREED AVERAGE												
-400	-30.40	-21.40	-16.90	-12.40	-7.90	-3.40	1.10	5.60	10.10	14.60	23.60	32.60	41.60
-300	-25.05	-16.05	-11.55	-7.05	-2.55	1.95	6.45	10.95	15.45	19.95	28.95	37.95	46.95
-200	-19.70	-10.70	-6.20	-1.70	2.80	7.30	11.80	16.30	20.80	25.30	34.30	43.30	52.30
-100	-14.35	-5.35	-0.85	3.65	8.15	12.65	17.15	21.65	26.15	30.65	39.65	48.65	57.65
0	-9.00	0.0	4.50	9.00	13.50	18.00	22.50	27.00	31.50	36.00	45.00	54.00	63.00
100	-3.65	5.35	9.85	14.35	18.85	23.35	27.85	32.35	36.85	41.35	50.35	59.35	68.35
200	1.70	10.70	15.20	19.70	24.20	28.70	33.20	37.70	42.20	46.70	55.70	64.70	73.70
300	7.05	16.05	20.55	25.05	29.55	34.05	38.55	43.05	47.55	52.05	61.05	70.05	79.05
400	12.40	21.40	25.90	30.40	34.90	39.40	43.90	48.40	52.90	57.40	66.40	75.40	84.40
500	17.75	26.75	31.25	35.75	40.25	44.75	49.25	53.75	58.25	62.75	71.75	80.75	89.75
600	23.10	32.10	36.60	41.10	45.60	50.10	54.60	59.10	63.60	68.10	77.10	86.10	95.10
700	28.45	37.45	41.95	46.45	50.95	55.45	59.95	64.45	68.95	73.45	82.45	91.45	100.45
800	33.80	42.80	47.30	51.80	56.30	60.80	65.30	69.80	74.30	78.80	87.80	96.80	105.80
900	39.15	48.15	52.65	57.15	61.65	66.15	70.65	75.15	79.65	84.15	93.15	102.15	111.15
1000	44.50	53.50	58.00	62.50	67.00	71.50	76.00	80.50	85.00	89.50	98.50	107.50	116.50
1100	49.85	58.85	63.35	67.85	72.35	76.85	81.35	85.85	90.35	94.85	103.85	112.85	121.85
1200	55.20	64.20	68.70	73.20	77.70	82.20	86.70	91.20	95.70	100.20	109.20	118.20	127.20
1300	60.55	69.55	74.05	78.55	83.05	87.55	92.05	96.55	101.05	105.55	114.55	123.55	132.55
1400	65.90	74.90	79.40	83.90	88.40	92.90	97.40	101.90	106.40	110.90	119.90	128.90	137.90
1500	71.25	80.25	84.75	89.25	93.75	98.25	102.75	107.25	111.75	116.25	125.25	134.25	143.25
1600	76.60	85.60	90.10	94.60	99.10	103.60	108.10	112.60	117.10	121.60	130.60	139.60	148.60
1700	81.95	90.95	95.45	99.95	104.45	108.95	113.45	117.95	122.45	126.95	135.95	144.95	153.95
1800	87.30	96.30	100.80	105.30	109.80	114.30	118.80	123.30	127.80	132.30	141.30	150.30	159.30
1900	92.65	101.65	106.15	110.65	115.15	119.65	124.15	128.65	133.15	137.65	146.65	155.65	164.65
2000	98.00	107.00	111.50	116.00	120.50	125.00	129.50	134.00	138.50	143.00	152.00	161.00	170.00
2100	103.35	112.35	116.85	121.35	125.85	130.35	134.85	139.35	143.85	148.35	157.35	166.35	175.35
2200	108.70	117.70	122.20	126.70	131.20	135.70	140.20	144.70	149.20	153.70	162.70	171.70	180.70
2300	114.05	123.05	127.55	132.05	136.55	141.05	145.55	150.05	154.55	159.05	168.05	177.05	186.05
2400	119.40	128.40	132.90	137.40	141.90	146.40	150.90	155.40	159.90	164.40	173.40	182.40	191.40
2500	124.75	133.75	138.25	142.75	147.25	151.75	156.25	160.75	165.25	169.75	178.75	187.75	196.75





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